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ABSTRACT

A dissertation-study focused on 210,305 non-categorical third and fifth grade reading results of the 1987 Pennsylvania Test for Essential Learning Skills (TELS). The data given by the Pennsylvania Department of Education was analyzed through descriptive statistics for the following purposes: (1) to determine a difference and a magnitude of a difference between reading assessment scores and those at or below a cut-score according to race, gender, and socioeconomic status; and (2) to determine a difference and a magnitude of a difference between reading assessment scores at or below a cut-score of students who are also in the Educational Consolidation and Improvement Act (ECIA) Chapter I according to race, gender and socioeconomic status. Major findings were that with or without ECIA Chapter I, Blacks and Hispanics ranked consistently below all other racial groups in reading. Twice as many Orientals, Blacks and Hispanics failed the TELS reading test as compared to the same racial groups with ECIA Chapter I. Those with greater amounts of newspapers, magazines, and books in the home had higher reading scores. Gender differences were also found in the study. (Sixty-six tables of data are included; 115 references are attached.) (Author/PRA)

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AN ANALYSIS OF PENNSYLVANIA'S TEST FOR ESSENTIAL LEARNING SKILLS

by

Rose Mary Radzievich

A Dissertation

Presented to the Graduate Committee

of Lehigh University

in Candidacy for the Degree of

Doctor of Education

in

Reading

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ABSTRACT

This study focused on 210,305 non-categorical third and fifth grade reading results of the 1987 Pennsylvania Test for Essential Learning Skills (T.E.L.S.). The data given by the Pennsylvania Department of Education was analyzed through descriptive statistics for the following purposes: (1) to determine a difference and a magnitude of a difference between reading assessment scores and those at or below a cut-score according to race, gender, and socioeconomic status; (2) to determine a difference and a magnitude of a difference between reading assessment scores at or below a cut-score of students who are also in E.C.I.A. Chapter I according to race, gender, and socioeconomic status.

Major findings were that with or without E.C.I.A. Chapter I, Blacks and Hispanics ranked consistently below all other racial groups in reading. Twice as many Orientals, Blacks, and Hispanics failed the T.E.L.S. reading test as compared to the same racial groups with E.C.I.A. Chapter I. Those with greater amounts of newspapers, magazines, and books in the home had higher reading scores. Gender differences were found in the study.

CHAPTER I

STATEMENT OF THE PROBLEM

Introduction

One of the major concerns in education in the late 1970's and early 1980's has been minimum competency testing. Minimum competency testing arose from dissatisfaction with the schools and a desire for accountability and efficiency (Tittle, 1982). At least 40 states have minimum competency testing programs in place. The influence of testing is greater now than at any time in educational history (Pearson & Dunning, 1985).

Historically, assessment schemes for measuring academic achievement date back to the First World War. Thorndike's scientific objectivity and compulsory education brought the testing movement to fruition (Pearson, 1985). Tests were objective. Academic assessment changed from the twenties to the sixties within a structure of objective, machine-scorable, multiple-choice tests that exhibited high reliability using factor analysis (Pearson & Dunning, 1985). Nationally, standardized testing became widely accepted to monitor teacher, student, and program performance (Tittle, 1982).

In the late sixties, detailed and highly skilled-specific-criterion-referenced tests provided an index of performance for mastery learning promoted by John Carroll and Benjamin Bloom (Bloom, 1956; Mager, 1962; Glaser, 1963). Glaser (1963) examined the relation between tests and instruction citing the need for criterion-referenced tests indicating what students could and could not do. Instead of holding instruction constant across students of varying aptitudes, instruction would vary with a mastery level of achievement. The method would be matched to the child (Valencia & Pearson, 1986). Mastery learning encourages students to master a "scope and sequence" of enabling skills. A standard of performance would be set with cutting scores to designate those who achieved mastery or competence.

Spurred by the egalitarian appeals in the sixties and seventies, federal programs such as E.S.E.A. Title I and other programs using norm-referenced standardized testing did not produce the expected equalization of outcomes (Cohen & Haney, 1980; Lerner, 1980). Norm-referenced tests provided differentiation among individuals, not their achievement in relation

to a "standard" or attainment of proficiency in a defined curricula.

There were also a series of studies that gave apparent evidence of a national decline in test scores. The need for "back to basics" in curriculum was expressed throughout the states with legislative activity for minimum competency testing (Resnick, 1980). By 1980, state governments provided at least 45% funding for school resources. Green (1980) questions whether public dissatisfaction or the shifting base for funding brought the impetus for minimum competency testing as a means of achieving accountability. The Education Commission of the United States, in 1979, stated that the majority of the 50 states had already mandated some of the competency testing either through legislation or state board of education action (Airasian, 1979).

In Pennsylvania, the need for a statewide essential skills test resulted from Governor Richard Thornburgh's education reform program, Turning the Tide: An Agenda for Excellence in Pennsylvania Public Schools. The document advocated competency tests for grades 3, 5, and 8 which would be an "early warning system" to identify reading and mathematics problems

early in a student's career. A second component of the program, state-funded remedial instruction, was suggested for those students in need of extra help. These recommendations led to the State Board of Education adopting Chapter 3: Student Testing on June 14, 1984. It required all public school students in grades 3, 5, and 8 to be given criterion-referenced tests in reading and mathematics as part of a program which would be called Testing for Essential Learning and Literacy Skills (T.E.L.L.S.). In 1987, the testing name was changed to Testing for Learning Skills (T.E.L.S.). Nonpublic students could choose to participate in the testing. The second part of the program, remedial instruction, was mandated by Act 93, 1984, which required districts to provide remedial instruction programs for students identified by the tests given under the State Board regulation.

Rankings of school districts have been published in newspapers across the state revealing the percentage of T.E.L.S. Test remedial students. More and more school districts and book companies now align their curriculum to match the T.E.L.S. objectives. Testing is becoming the primary basis for our most important decisions about curricula and programs (Bloom, 1989).

Criticism has surfaced as to the equity of the T.E.L.S. competency testing related to race, gender, and socioeconomic status of students. The overlap of T.E.L.S. testing and E.C.I.A. Chapter I testing has been questioned. Many students identified for T.E.L.S. remediation are also E.C.I.A. Chapter I students. Policies implementing equality of educational opportunity can also be analyzed u sing the results from this study to improve quality and efficiency.

Purpose of the Study

The purposed study focused on the third and fifth grade reading results of the 1987 Test for Essential Learning Skills (T.E.L S.). At present, there has been very little analysis of the test by researchers outside the Pennsylvania Department of Education. The Department of Education has given the researcher access to all T.E.L.S. test results for third and fifth grades across the state. This data was used for the following purposes: (1) to determine a difference and a magnitude of a difference between reading assessment scores and those at or below a cut-score according to selected variables; (2) to determine a difference and a magnitude of a difference between

reading assessment scores at or below a cut-score and those at or below a cut-score that are also in a federal remedial program according to selected variables.

To accomplish the purpose of this study, answers to the following questions were sought:

1. a. Is there a difference between the Test for Essential Learning Skills' reading scores for all third grade and reading scores for third grade at or below the cut-score according to the following variables?
    1. race
    2. gender
    3. socioeconomic status

1. b. Is there a difference between the Test for Essential Learning Skills' reading scores for all fifth grade and reading scores for fifth grade at or below the cut-score according to the following variables?
    1. race
    2. gender
    3. socioeconomic status

2. a. What is the magnitude of the difference between the Test for Essential Learning

Skills' scores for all third grade and reading scores for third grade at or below the cut-score according to the following variables?

1. race
2. gender
3. socioeconomic status

2. b. What is the magnitude of the difference between the Test for Essential Learning Skills' reading scores for all fifth grade and reading scores for fifth grade at or below the cut-score according to the following variables?

1. race
2. gender
3. socioeconomic status

3. a. Is there a difference between the Test for Essential Learning Skills' reading scores for third grade at or below the cut-score and those reading scores at or below the cut-score that are also in E.C.I.A. Chapter I according to the following variables?

1. race
2. gender
3. socioeconomic status

3. b. Is there a difference between the Test for Essential Learning Skills' reading scores for fifth grade and those reading scores at or below the cut-score that are also in E.C.I.A. Chapter I according to the following variables?

    1. race
    2. gender
    3. socioeconomic status

4. a. What is the magnitude of the difference between the Test for Essential Learning Skills' reading scores for all third grade students at or below the cut-score and those reading scores at or below the cut-score that are also in E.C.I.A. Chapter I according to the following variables?

    1. race
    2. gender
    3. socioeconomic status

4. b. What is the magnitude of the difference between the Test for Essential Learning Skills' reading scores for all fifth grade at or below the cut-score and those reading

scores at or below the cut-score that are also in E.C.I.A. Chapter I according to the following variables?

1. race
2. gender
3. socioeconomic status

Definition of Terms

For the purposes of this study, the following terms with their definitions are used:

E.C.I.A. Chapter I

The Educational Consolidation and Improvement Act, 1981, provides remedial reading and math services to students. Funding is provided by the federal government based on income and need (PA Department of Education, 1988).

Minimum Competency Testing

Minimum competency testing is defined as a program in which students are tested to determine their mastery of certain skills defined as essential aspects of school learning or essential for performing tasks routinely confronted in adult life (Airasian, 1979).

The test for Essential Learning Skills is, according to the Department of Education in

Pennsylvania, a basic skills test in which the acceptable criterion of objectives is set by the Department of Education (Pennsylvania Department of Education, 1988).

Race

Race is defined as a large division of the family possessing a common ancestry and more or less distinguishing physical traits (Good, 1959).

For this study, students were classified into categories of race as follows: (1) black, (2) white, (3) Hispanic, (4) Oriental, (5) other.

Reading Achievement

Reading achievement is defined as the level of competence achieved by a student in reading as compared to predetermined criteria.

Reading achievement was measured by the Pennsylvania Test for Essential Learning Skills. The T.E.L.S. test is a basic skills criterion-referenced test in reading and math. This study deals with reading only.

Socioeconomic Status

Socioeconomic status is defined as the position that an individual or family occupies with

reference to the average of standards of cultural possessions, effective income, material possessions, and participation in the community (Chapin, 1928).

Traditional indicators of occupation, education, and income are frequently used. Nevertheless, frequent references are found to such factors as presence of reading material in the home (White, 1982).

For this study, the presence of reading material in the home such as magazines, newspapers, and the number of books, will be used to determine socioeconomic status. This interpretation of sociceconomic status was defined, by the Pennsylvania Department of Education for the 1987 T.E.L.S. Test (Pennsylvania Department of Education, 1988).

CHAPTER II

REVIEW OF THE LITERATURE

Due to the scope of this study, several factors must be discussed in order to present the research data related to the topic. For the purpose of organization, the review of the literature will be presented in the following manner: Minimum Competency Testing, Criterion-Referenced Tests, Norm-Referenced Tests, Race, Gender, Socioeconomic Status, and E.C.I.A. Chapter I.

Minimum Competency Testing

Minimum competency testing arose from dissatisfaction with the schools and a desire for accountability and efficiency (Tittle, 1982). Assessment procedures have been recognized as the major control on what is taught, when it is taught, and how often it is taught. Historically, assessment has played a dominant role in determining the ethos of school life (Broadfoot, 1980).

At the time of the First World War, Thorndike took assessment from a group of highly trained examiners to the purity of an objective, unbiased set

of multiple choice questions. Standardized testing and compulsory education would "monitor" the high rate of school failures (Pearson, 1985). From the twenties to the sixties, assessment developed into machine-scorable, multiple-choice tests with high reliability (Pearson & Dunney, 1985). Standardized testing became widely accepted to monitor teachers, students, and program performance (Tittle, 1982).

In the late sixties, the development of detailed and highly skilled criterion-referenced tests provided an index of performance for mastery learning promoted by Benjamin Bloom (Bloom, 1956; Mager, 1962); Glaser, 1963). Before mastery learning, schools held instruction constant across students of varying aptitudes and allowed achievement to vary. Bloom advocated holding achievement (or at least some minimal, i.e. mastery, level of achievement) constant and allow instruction to vary (Pearson, 1985). Glaser (1963) examined the relation between tests and instruction, suggesting the need for criterion-referenced tests that indicated what pupils could or could not do. This concept led to establishing a standard of performance and to technical work in cutting scores that would distinguish between those

who were competent or had attained mastery, or had attained minimum competence.

Through the mid-seventies and eighties, the majority of the 50 states were actively involved in some aspect of minimum competency testing. Many of these programs were initiated from outside the educational establishment and originated from legislation and state boards. Competency testing would address accountability issues of basic skill levels of high school graduates and identify students at other grade levels who failed to acquire the basic skills. The emphasis was on output of the educational system (Winfield, 1987). Federal programs, such as E.S.E.A. Title I and other special programs using standardized testing, did not produce the expected equalization of outcomes (Cohen & Haney, 1980; Lerner, 1980).

Gilman (1978) states that minimum competency was not completely originated by citizens. Two task forces of the National Association of Secondary School Principals endorsed by the Council on Basic Education recommended minimum competency testing.

Graduation from high school came to mean 12 or 13 years of regular attendance, not competence in regular

academic skills. In 1978, 15% to 20% of U.S. high school students were functionally illiterate. Several high school graduates who claimed illiteracy sued the school systems that were to have educated them. Minimum competency testing was not a cure-all but a reasonable approach to a problem.

Measurement was perceived as a catalyst to improve instruction (Popham, Cruise, Rankin, 1985). Many people mistakenly assume that most competency testing programs are tied to high school diplomas--that is, that youngsters are obliged to pass tests in order to receive high school diplomas. By 1985, most competency tests in the 50 states relied on markedly less stringent sanctions for those who fail. Sanctions include notifying a student's parents or providing remedial assistance to a student who performs poorly on the test.

According to Gilman (1978), minimum competency testing would cause teachers to become more motivated to improve teaching skills. Minimum competency testing constitutes a prescriptive remediation system based on individual needs and less comparative of one student to another. Outstanding schools have basic skills as a high priority with resources allocated

accordingly. Students need basic skills before art appreciation. Minimum competency testing raises the issue of prioritizing academics over social programs such as alcohol and drug programs. Minimum competency testing is a diagnostic criterion-referenced test which means a low percentage of students are expected to fail. Remediation would be given with a retest to exit the program. Students would be labeled but the mastery of basic skills would compensate for it. Minimum competency testing provides the public with accountability by educators and students. Schools are businesses and will provide education for all.

State legislatures view test results as a quality indicator of service given by reading teachers. There should be a good match between what is taught and tested. State mandated minimum competency testing evaluates the developing educational program to which the student has been exposed. Data can be used to reflect strengths and weaknesses of educational programs (Fox and Beezer, 1978). Teachers are asked to teach more times during the day than they had previously. Frill courses are eliminated (Gorce, 1982).

Prevalence of incompetence among potentially good students is recognized by minimum competency testing. Such tests can motivate efforts to learn and efforts to teach by providing specific goals and rewards. Solution to failure is not the exclusive responsibility of the school. The student and his family should be concerned. The educational system can provide alternative opportunities for learning. Students and teachers should have advance knowledge of competencies to be tested. Differential scores should be reported to reward excellence.

California legislation kicked off a national trend that established minimum competency testing in reading, writing, and math. Evans (1985) compared the graduation requirements in 1976-77 to those in 1981-82. He found that minimum competency tests had been a catalyst for change in California school districts. More required English credits with less English electives were given with more emphasis on writing skills and updating course descriptions. Staff development in writing and structured sequenced instruction were areas most affected by minimum competency testing.

Popham (1985) cites that measurement-driven instruction in Michigan, Texas, Maryland, and South Carolina yielded improvements in students' basic skills. If the assessment devices used are criterion-referenced tests constructed to illuminate the instructional decision making with instructional consequences tied to pupils' test performances, then the testing program would drive the instructional program. Significant competencies would have a salutary effect on the instructional program. In districts in which there has been an emphasis on staff development related to minimum competency testing, Popham (1985) notes that student scores have increased substantially.

A survey to assess minimum competency testing in reading in 1984 and resulting remedial programs was sent to each State Department of Education in the United States with all responding (Gambrell, 1984). Over half of the 50 states require minimum competency testing in reading. Contrary to Chall's (1979) finding that only four states were not planning minimum competency testing, the present survey showed 19 states do not plan minimum competency testing in reading. Only 15 states link minimum competency

testing to graduation. State Department of Education personnel most often developed the test in reading with multiple choice responses. Other results suggest that minimum competency testing in reading is closely related to remedial programs with early identification and frequent testing. Test results are used for instruction guides. Some states fund remedial programs and most states emphasize staff and curriculum development for remedial programs. More attention is being given to minimum competency testing results for instructional improvement for remedial students.

In reference to Chall's (1979) survey, the minimum competency testing in 1984 did not become the strong force as expected in 1979. However, Chall raises the question of Peter Doe, a functional illiterate. Was he illiterate due to poor achievement tests or due to poor school resources and personnel? As the 1984 survey had shown (Gambrell, 1985), the minimum competency testing was a constructive force to improve student achievement. Whether sufficient funds were being allocated to implement minimum competency testing recommendations is still to be answered.

Competency testing has its backbone in the "Back-to-Basics" movement. Brodinsky (1935) cites the movement's focus on the three R's, Patriotism, and Puritan morality. "Back-to-Basics" advocates demand emphasis on reading, writing and arithmetic; elimination of frills and social sciences; strict discipline with a dominant teacher using drill, rote, and testing; and promotion from grade to grade based on competency testing. Educators responded to public outcry by requiring competency testing, proficiency testing, and a performance-based curriculum. School districts in general have responded with an emphasis on reading, writing, and arithmetic. Few have adopted formal "Back-to-Basics" programs. Advantages to the "back-to-Basics" movement may result in improved education but at the price of a "generation of minimal mediocrity" (Brodinsky, 1985).

Cohen (1988) notes that increased policy-making activity at the state level is bound to increase demands by the states for relevant data to guide education reform. States now pay about 45% of education costs. State assessment should be focused on individual schools and not be limited to students' academic performance. Multiple measurement and data

collection strategies should be used with tests, surveys, observations, and interviews. As issues arise, the state assessment system should anticipate needs. An effective schools' perspective would enable states to examine the overall impact of school reform. Minimum competency testing would not be used solely as an indicator of educational quality.

In 1978, Pipho (1978) stated that few local school districts implemented minimum competency testing, so the state became the governing body to start minimum competency testing due to public demand. The legislature may mandate minimum competency testing with little or no financial support for remediation. The new minimum competency testing requirements are blurring the classic lines between federal, state, and local control (Anderson & Pipho, 1984). In the eighties, testing became the preferred means to effect educational change. Accountability has turned testing from norm-referenced tests to criterion-referenced tests supported by complex computer procedures. The pattern of instructional and program design became fixed. The definition of goals and objectives was followed by some form of progran followed by evaluation. Minimum competency testing was adopted by

Florida, New York, and other states. Opposition came from educators, but the public viewed minimum competency testing as an answer to their dissatisfaction. Educators were over-ruled. School evaluations would be done by measures of output.

Anderson and Pipho (1984) also state the need for state policy-makers to view testing realistically. Different testing strategies would be used for various motivational purposes. People of different ability levels and achievement are affected individually by various testing strategies. Minimum competency testing can lower expectations, and testing for the maximum can discourage those who are average or below. Preparation of a testing system involves content, objectives, test items, administration, and evaluation of results. One must consider how other requirements and standards interact with testing strategy. Discussion has already started on state-by-state comparisons.

The trend toward minimum competency testing may have resulted from the issue of educational control and responsibility with the issue of choice between educational priorities of excellence and competency (Lynch, 1982). The controlling public want the

educators to assume a greater responsibility for the results of schooling. Demands of quantitative success as well as failure come from a suspicious public. In light of conditions that inhibit educational excellence for all, educational competency for all may be more realistic and egalitarian. Minimum competency testing is an accountability part of a total competency-based education. Criterion-referenced tests are quantitative, not intuitive.

According to Pipho (1981), the enactment of minimum competency testing is a political issue which may permit accrual of benefits to policy-makers. Very little agreement has been reached as to what to include in a minimum competency test mandate. There is a wide range of provisions in minimum competency testing with its legality not fully addressed.

Minimum competency testing has many questions to be answered. Brickell (1978) cites seven important questions: what competencies, how to measure, what to measure, one minimum or many, how high the minimum, minimums for students or for schools, and what to do with the incompetent. Each state has answered these questions with similarities and differences.

According to the National Council on Measurement in 1980 (Linn, Madaus, & Pedulla, 1982), many educational decisions can be improved by objective and equitable assessments of achievements and characteristics of individuals. Tests can provide more objective and more equitable assessments than other forms of evaluation. When used in conjunction with other information, test results can contribute to improved educational decisions. When used in isolation or incorrectly, test results can lead to poor and damaging educational decisions. Exclusive reliance on a minimum competency test for assigning students automatically to remedial classes, for determining promotion, or for awarding a high school diploma are examples of improper use of tests (Linn, Madaus, & Pedulla, 1980). Minimum competency testing scores are being used as if they were infallible. Passing scores on minimum competency testing vary greatly depending on the procedure used to set the standard and on the category of people who make the judgments. Glass (1978) points out that competence is a continuous trait.

Minimum competency testing raises questions of validity for content and construction (Linn, 1982).

The curricular materials should match the instruction appropriate for the educational level and test content. The Fifth Circuit Court in Florida in Debra P. v. Turlington, 1981, upheld this definition of validity. Construct validity involves the form of the test question. Minimum competency testing used multiple-choice questions which Roger Farr (1980) argued measures low-level literal comprehension, not understanding. Minimum competency testing needs to demonstrate that those failing or below the cut-score will benefit from the remediation forced on them. There is an implicit prediction that those below the cut-score will do better the second time around on the minimum competency testing (Linn, 1979).

McClung (1978) emphasizes curricular and content validity. Minimal standards can become maximums unless there is a strong commitment to a broader view of education. Minimum competency testing should be fair with a phase-in period providing remediation and shared responsibility for students and teachers.

Cautions concerning minimums as maximums have been raised by Roy Forbes, National Association of Educational Progress Director, in 1981 (Dearman & Plisko, 1981). In his opinion, the challenge of the

Eighties was to teach students how to use basic skills in reading and other areas in more complex problem-solving activities with critical thinking. NAEP assessments of students in the 1970's suggested that older students had difficulty applying basic skills to more advanced tasks. Basic education must mean a quality education. Brodinsky (1985) projects the possibility of a "generation of minimal mediocrity". By stressing mechanical skills and denigrating arts and creativity, American education may lose the power to be inventive and productive.

Cawelti (1978) suggests putting money into inservice programs for teachers and administrators, not competency, to improve schools. Minimum competency testing can create curriculum imbalance, lack of funds for remediation, minimum v. maximum standards, and a proliferation of testing. Nathan and Jennings (1978) call minimum competency testing educational bait-and-switch by saying that a paper and pencil test is an indicator of performance of life's tasks. William Turnbull, president of Educational Testing Service in 1978 asserted that test scores alone omit major areas of human characteristics and functioning related to career and academic success.

Output of the educational system supposedly is measured by minimum competency testing (Wise, 1978). Federal courts in New Jersey have ordered the establishment of educational goals, instruction for reasonable proficiency in communications and computation, and evaluation of such programs. This was in response to Robinson v. Cahill concerning equalizing educational expenditures. A minority of students will fail minimum competency testing, but the school must be efficient and treat all equally. Policy-makers may believe that legislating goal attainment is sufficient for goal attainment to occur. On standards and public policy, Arthur Wise (1978) argues that improved education will come if the public has evidence that academically talented people are becoming teachers. They will be willing to leave them alone to practice their profession.

Bost (1976) makes a stand for realistic views toward testing in general. A vast number of superior schools whose students consistently measure below average on standardized tests may be populated by minorities, the poor, and socially alienated. No state or school system should administer testing unless it leads to improved instruction. A reasonable

alternative to standardized testing might be the use of diagnostic tests to determine learners' problems in a specific subject. The improvement program would be limited to focus critical educational resources to meet a desired goal. When measured achievement closely approximates measured ability it is hurtful to browbeat a community and its young people with their below averageness of educational quality. Society has not figured out a way to do anything about it. Schools and communities have the responsibility for renewal and improvement. It is not necessary to label half of us something less worthy and less useful than the other half.

Savage (1978) notes that minimum competency testing may only be measuring accumulated deficits. Broadfoot (1981) notes that testing consistently reinforces a limited range of objectives. The majority of pupils excluded from academic success view themselves as failures because the system rewards one kind of success. Recognition needs to be given to the whole range of potential educational goals.

In Hard Times, by Charles Dickens, Thomas Gradgrind epitomized minimum competency testing:

> With a rule and a pair of scales, and a multiplication table in his pocket, sir, ready to weigh and measure any parcel of human nature, and tell you exactly what it comes to. It is a mere question of figures, a case of simple arithmetic.

Thomas Gradgrind's faith used simple arithmetic to solve complex problems (Franzosa, 1984). Minimum competency testing tends to focus on the technical, not the philosophical problems. The promotion of creative intelligence, exploration, and excellence within the classroom is seen as wastage. Minimum competency testing is not a strategy for improving individual achievement, but only questionable means for measuring it.

Madaus (1985) cites policy-makers have created the illusion that test performance is synonymous with quality education. By focusing solely on test results, we sidestep the proper role of testing and fall into Mr. Gradgrind's 19th century utilitarianism.

Minimum competency testing provides a snapshot of information (Swift, 1987). Lacking in test score results is information on skills covering studying, reasoning, imagination, and writing. Leadership must not bend the curriculum to make it one that is used only to prepare students to take tests to measure educational success.

Pearson and Dunning (1985) view test results as one source of information. Specific decisions about individual students can draw from multiple sources of information. Perhaps criterion-referenced tests would be better used to assess instruction rather than learning. Our judgments on reading competencies should be based on not how well they perform atomistic reading skills, but on how well they perform reading abilities in meaningful and functional ways.

Valencia and Pearson (1986) note a skilled reader chooses from many skills and orchestrates the combination to produce meaning. Because legislative agencies need measures to determine general trends, state assessment tests can be useful. To make decisions about individuals from these same tests would be unreliable.

Norm-Referenced Tests

Norm-referenced tests compare performance among those assessed. Performance includes a wide variety of cognitive and noncognitive processes. Learning outcomes are measured by objective tests. Nonobjective assessments of performance in affective measures can also be measured by norm-referenced tests.

The process of comparison takes two forms. It may be based on relative performance of individuals within a specified group. More generally, norm-referenced assessment involves the estimation of individual or group performance in relation to an average or norm for a specified population. This creates a "standardization". The more effectively a test discriminates among different abilities, the more accurate will be the normative interpretations. Norm-referenced assessment deals with rankings and relative performance among individuals. These tests have a statistical rather than curricular meaning. Norms describe, not prescribe.

Published norm-referenced tests are designed to note progress by provision of an equivalent form of a test, incorporating age or grade adjustments, testing time, and retest adjustments. This data is derived from cross-sectional studies. Speaking in the narrow sense, true norms for progress are rarely available (Vincent, 1982).

Construction of a norm-referenced test is guided by principles of content and format with psychometric properties. For achievement tests a curricular analysis is made according to process and

content to be assessed. Items are drafted to fit concepts to be tested. Exact numbers and balance of times will reflect relative importance attached to different categories. Subject specialists review the draft items for content validity. Items in many instances are objective with multiple-choice answers. Psychometric characteristics of norm-referenced tests utilize a sophisticated technology to evaluate and control statistical features of items and tests. Textbooks fill library shelves with various types of analyses. Published guides for the nonspecialist in basic principles of normative test construction are certainly available (Marshall & Hales, 1971).

The educational system has used norm-referenced assessment in administration and teaching, clinical and guidance work, research and evaluation. Established texts (Cronbach, 1970) deal with application and interpretation of normative measurements. Broadfoot (1979) has criticized the use of norm-referenced testing for administrative policy. Differentiating between students of differing abilities is an attractive facet of this type of testing. Use of norm-referenced testing for screening, selection, placement, and monitoring of

standards has aroused considerable criticism (Mehrens & Lehmann, 1975).

Criticisms are usually concerned with psychological theories on which such tests are based. Concern for accountability in education has brought pressure for greater use of system-wide monitoring evaluation. Social impact of accountability-related assessment programs can be considerable. Capacity of normative measurement to fully express school achievement has been scrutinized with criterion-referenced testing as an alternative means of testing (Burgess & Adams, 1980).

Advocates of norm-referenced testing point to the capacity to clarify and add perspective to teachers' judgments of individual and group achievement (Nuttall & Skurnik, 1969). The testing can also elucidate strengths and weaknesses in different skill or subject areas. Appropriate training, expertise, and availability of a suitable choice of instruments are needed to make testing useful and efficient (Mehrens & Lehmann, 1975).

Cole (1982) views norm-referenced testing and criterion-referenced testing as a major contribution to instructional stagnation. Testing programs should

provide a benchmark, not an anchor. Current tests, according to Cole, have five weaknesses: outdated assumptions, intertwined commercial materials, different factors assessed in subtests suggested, subtest divisions in subject matter not optimally practiced in the classroom, and not constructed from acurrently viable base. However, group testing is not, of itself, an evil.

Green (1975) reaffirms the point that tests are used unwisely, misinterpreted, overinterpreted, or handled as weapons rather than as tools.

Criterion-Referenced Tests

A criterion-referenced test is constructed to assess an individual's performance with respect to a well-defined domain of behaviors. Rigorous and precise domain specifications are given to maximize the interpretability of an individual's domain score. A type f criterion-referenced test is the mastery test to classify students as masters or nonmasters of an objective. Item analysis procedures determine item discrimination. Methods of setting performance standards, estimation of error, and determination of mastery-nonmastery decision consistency are important

in its development (Berk, 1980). The mastery test format is analogous to minimum competency testing.

According to Berk (1980), the mastery test is built on a set of instructional and behavioral objectives. The objectives-based definition is less precise and "ambiguous" compared to the strategies used to construct a domain-referenced test. It is extremely practicable. Item construction uses objective-based strategies with a heavy reliance upon traditional item construction rules. Item domain for a mastery test may be either a finite or an infinite domain. Items viewed collectively are assumed to make a sample from "all possible items that could have been written from objectives".

Test length includes practical and statistical perspectives. This includes importance and type of decision-making, importance and emphases assigned to objectives, number of objectives, and practical constraints. Statistically, test length deals with the relationship between number of items, decision validity, and decision reliability indices. Item analysis is desirable for mastery test items due to intended uses of the test scores for mastery-nonmastery decisions and to the traditional,

relatively subjective procedures employed in writing the items. Scrutiny of items must be done with respect to gender and minority bias to differentiate between groups of masters and nonmasters of the objectives. The test item also must be free of structural flaws that could cue or confuse the students (Roid & Haladyna, 1981).

Item selection on mastery tests are selected on their congruence with the objectives and sensitivity to instructional treatments. Parallel forms assumption is related to (a) how the item sample that comprises one test form and the samples that comprise alternate forms are generated, and (b) the characteristics of the item domain from which those samples are generated. Objective-based items can be developed with two or more item samples for the same objectives and domain. Many time those samples are constructed systematically to contain content and to yield means, variances, and item intercorrelations identical to the first sample. Item samples or alternate test forms are said to be classically parallel or equivalent to the first form. The statistical equivalence imposes restrictions on the domain. Content or set of objectives being measured

should be relatively homogeneous so items possess similar difficulty (Bork, 1980).

Standard setting is at times difficult because it is based on assumptions about the acquisition of the underlying trait or ability in state models and continuous models. Methods could be based purely on judgment, judgmental and empirical information, or judgmental methods with judgmental empirical methods/model.

State models assume that mastery is the standard 100%-all or nothing. Deviation from this true state is attributable to "intrusion" or "omission," and the standard value is adjusted. Continuum models assume that mastery is a continuous distributed ability that can be viewed as an interval on a continuum. The area at the upper level circumscribes the mastery boundaries. There is no best method except human judgment must be used. Judgmental models are based on the probability that competent persons would select particular distractors in each item or would answer each item correctly. Some view this method "as pulling probabilities from the air." Judgmental-empirical methods are based on judgment and actual or simulated data, judgmental

data, and/or distribution assumptions (Airasian, Madaus, & Pedulla, 1979).

For a mastery test, a standard must be set. The minimum competency test is a mastery test that has a single cutting score for the total test. Information on objective mastery might be used for diagnostic purposes (Popham, 1978). Validity is determined by judgmental and empirical procedures for the mastery test. Criterion-related validity and construct validity are also needed. The definition of success or mastery must be specified with success and non-success groups. Criterion-related validity may be concurrent or predictive. Construct validity relates to decision validity. This defines itself as mastery-nonmastery classification decisions. This is important in selecting a cutting score. Reliability methods are based on parallel forms assumption, cutting score selection, and uses of test scores. Recent comparisons of one and two administration estimates suggest Huynh's method may be especially useful (Berks, 1980).

In a study by Horodezky and Labercane (1983), 111 subjects were utilized in a study to determine the ability of the Ginn Criterion-Referenced Reading

Management System of Tests (GRMS) to provide teachers with a prediction of reading performance. Ginn criterion-referenced and mastery level tests were compared with a series of formal (Stanford Diagnostic Reading Tests or SDRT) scores and informal (teacher rating, classroom rating inventory) measures of reading performance. Findings indicated that (1) all tests at grade were to be equally effective predictors of reading performance; (2) Ginn (GRMS) tests were observed to be increasingly less effective in predicting reading performance from grade two to three; (3) the Classroom Reading Inventory was seen to be an effective indicator of reading performance at all three levels; (4) as children gain greater proficiency in reading, GRMS appears to be less capable of tracking this divergence in reading skill development.

From 1915 to 1970, standardized testing was used to assess student performance (Pearsin & Dunning, 1985). But with mastery learning and criterion-referenced testing came an alternative method for evaluating performance. Instead of comparing an individual's score with the mean score of some group, advocates of the new approach suggested comparing it

with some pre-determined standard of mastery, say 80% on a given subtest. Mastery learning holds achievement constant and allows instruction to vary. The teacher scored the test and provided a list of which kids had failed to pass which skills. From the lists, students were given a list of workbook pages and ditto sheets that they were to complete on that skill. A retest was given with more worksheets for those who failed.

According to Valencia & Pearson (1986), the essence of the assessment instruction relationship under a mastery learning framework is this: mastery learning encourages us to think of reading instruction as a matter of making certain that students master a "scope and sequence" of enabling skills. The "reader" moves along that assembly line, picking up a new part or skill at each station along the way. When all the parts are in place, we have a student ready to tackle real reading. Or do we?

Race

Coleman (1975) states the fact that each person begins life with a set of private resources, genetic and environmental, with children having unequal opportunities. Society must decide what level of

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public resources and what imbalance of public resources it would invest to reduce the level of inequality that arises from private resources. The investment of resources should be as efficient as possible. Innovations in education with examination of effects are necessary to learn positive direction for such investment.

According to Ortiz (1986), the most recent evidence from the National Assessment of Educational Progress shows that, despite large gains in reading performance by minority children over the last decade, Hispanic and black children continue to read at significantly lower levels than do whites. Ortiz used the National Assessment Educational Program's 1984 survey of reading proficiency among in-school fourth, eighth, and eleventh graders. The purpose was to examine relationships between lower reading proficiency among Hispanics and black children with parents educational level and reading activities on the part of the family and child, e.g., reading in the home and amount of reading for enjoyment.

The study also examined the direct effect of parents' education and reading activities on reading proficiency among minority and nonminority children.

The results show that, while no factor explained a large portion of the differences among race/ethnic groups, the racial/ethnic differences were reduced. Reading activities were found to affect the reading proficiency of both minority and nonminority children. Ortiz recommends increasing the levels of reading for all children.

According to the National Center for Educational Statistics in 1985, achievement of black and Hispanic children with respect to reading, math, and science is significantly lower than that of white children.

Sowell (1981) studied racial assumptions according to a historical perspective. There is no a priori reasons why statistics collected at a given institution must be solely the result of the policies of that institution, rather than the characteristics of the population in question. The habit of comparing black I.Q.'s, and reading scores to the national average glosses over the fact that "national average" is itself only an amalgam of results as disparate of the black-white differences under discussion.

Back in the 1920's, numerous studies had shown similar I.Q. patterns for minorities of Italians,

Greeks, and Poles. The performance pattern is not unique to blacks. There was a time when Jews scored below the national average. Sowell feels we cannot solve the minority problem unless we face the problem. People spend time on studies and more projects, but the real problem of teaching youngsters reading and thinking must be addressed.

According to Paulson and Ball (1984), more affluent school districts can provide greater access to tools of education and may be able to attract better administrators and teachers. Until the states using such exams assume a greater responsibility for ensuring that all students are afforded similar opportunities in all aspects of education, the attainment of such a goal will be unlikely.

Serow (1984) notes that one of the major issues surrounding the minimum competency testing movement in American education is its potential impact on minority and low-income students. To its critics, minimum competency testing represents another case of potential discrimination against minorities and the poor, and an obstacle to social and economic equality in American life. Serow's study reviewed the outcomes of minimum competency testing for minorities and low-

income students. He emphasized interest in pupils' performances in the "high-risk" minimum competency testing programs that deny the high school diploma to students unable to pass the competency test by graduation.

The rationale for the diploma sanction (Hart, 1978) is that it lends clout to the competency program and provides additional incentive for the low-achieving student. Haney and Madaus (1979) are concerned that pupils who have had educational opportunities equivalent to their middle peers will suffer adverse effects from minimum competency testing, regardless of test bias or inferior instruction. Courts share apprehension concerning minimum competency testing. The Florida competency test was enjoined from enforcing its diploma sanction due to previous racial segregation (Debra P. v. Turlington 1979; 1981). Generally, the courts did not outlaw the use of competency test results as a diploma screen.

Minimum competency tests focus on basic academic skills influenced by a pupil's sociocultural environment (Coleman, 1975). Supporters of minimum competency testing think the intense concentration on

academic fundamentals which characterize competency remediation will be of greatest benefit to those shortchanged by public education (Gilman, 1978; Popham, 1981). All students are believed to be capable of attaining the required level of competency before graduation day (Gilman, 1978).

The opposing viewpoint maintains that competency testing poses substantial risks for racial or economic minorities who are over-represented at the lower academic end. A stigma of failure for low-achieving students will be reinforced if they are placed in separate remedial classes (Madaus & Airasian, 1977; Glass, 1978).

The greatest danger is that minimum competency testing diploma sanctions will exacerbate racial and economic inequality. Eckland (1980) says black educational attainment exceeds those of academically comparable whites. Blacks overcome initial academic deficiencies as they pursue advanced levels of education. Diploma sanctions punish marginal academic students. Research indicates that education credentials are important determinants of future socioeconomic status for members of minority and lower-income groups (Jencks et al., 1972).

Caution about the remedial powers of competency programs is also suggested by findings from a North Carolina study which compared test/retest gains for blacks and whites (Serow and Davies, 1982). Both groups improved, but the whites had improved three times more than the blacks with a 21% gain compared to an 8% gain. The racial gap in reading was widening. Overall reports from state education agencies indicate few pupils had been denied high school diplomas solely on competency testing. The North Carolina testing program was the only state that would divulge information on racial and socioeconomic backgrounds.

At the present time, educational experts are evenly divided as to whether minimum competency testing is a reasonable solution to declining achievement. In general, minorities have lower initial passing rates, benefit less from some form of remediation, and receive a disproportionate share of diploma sanctions than do their white classmates. Legally, the United States Supreme Court has on several occasions ruled that racially differentiated testing outcomes do not constitute prima facie evidence of discrimination (Washington v. Davis, 1976;

National Educational Association v. South Carolina, 1978).

Madaus (1981) has argued that by emphasizing the primitive aspects of testing, these programs have failed to maximize their potential as diagnostic and remedial tools. Researchers need to gather evidence comparing the relative effectiveness of these programs with those where competency testing is mainly used for remediation of low-achieving students.

John Best (1988) claims the dream of equality of opportunity is in our school system. This claim rests in the assumption that public schools offer every child an equal chance to achieve. Our American dream rests in the effectiveness of our schools. That concern is reflected in national reports on education today. Evidence is overwhelming that American schools encouraged the advantaged and restrained the disadvantaged. Education is supposed to be the "equalizer" in society. Generations of repeated poverty represent a failure of our society.

Faltering American education implies a decline in international status in support of democratic political and social ideas. An alarming threat in American educators' failure is the eclipse of American

economic and industrial leadership. According to Best, beyond equity concerns is the development of our people to the fullest to be future leaders. Schools have to be redesigned to meet the intellectual and technological needs. Great numbers of literally unemployable people could well become a permanent underclass in American society. We need to examine what our society means by a standard of excellence in schooling.

Education is the way out and up according to Dr. James Comer (1987), Director of the School Development Program of Yale University Child Study Center. Dr. Comer developed an educational program to encourage low-income children to grow intellectually and emotionally. The program emphasizes learning basic skills while teaching social skills and appreciation of the arts. Schools cannot do it all and parents need to help via organizations or individually.

Gender

Halpert (1985) states the egalitarian change from 1970. Girls participate in sports and shop classes that were off limits, but equity is still a long way off. The vast majority of girls in vocational educational programs are preparing for

traditionally female jobs like nursing or secretarial work. America's teenage pregnancies are the highest in the industrialized world. Educational equity may halt altogether if the Reagan administration's attitude toward undermining Federal laws and programs designed for equity continues. Title IX is directly responsible for the sharp increase in the proportion among medical school entrants, from 11% in 1972 to 25% in 1980. The same testing procedures must be used for men and women. Pregnant teenagers can no longer be expelled from school. In 1984 there were 10,000 college scholarships available to women, compared to 1972 in which there were almost none. High school female athletes went from 7.5% in 1972 to 34.6% in 1983. Title IX enshrined the principle of equal education for the sexes in national policy. In 1984 the Supreme Court in Grove City v. Bell reversed the government's position and opened the way to discriminatory practices. Other programs for women's equity have received similar slashes on their operational capability.

Congress has opposed the President on the issue of educational equity, but has been unable to counter the policies of the administration. In the face of

the government's attack on equity, a greater burden falls on the school administrators, teachers and parents. Teachers especially need to develop greater sensitivity to these problems. Nevertheless, the government is trying to reverse the irreversible. Women no longer just want to work; they need to maintain themselves and their families. That means acquiring marketable skills, and greater educational opportunities. Advocates of educational equity are increasingly hard pressed to turn that awareness into established practice (Halpert, 1985).

In 1986, Charol Shakeshaft in Phi Delta Kappan highlighted the major crisis in equality of treatment and outcome in most schools for women. Since 1983, some blamed the lack of excellence on the pursuit of equity. President Reagan asserted that the schools were failing and mediocre due to focusing on minorities, females, and handicapped students. Equity takes away from excellence. The reality is that excellence cannot be achieved without equity. The authors of A Nation at Risk inform us that all regardless of race, class, or economic status are entitled to a fair chance. Sex was not included in that quote.

Shakeshaft (1986) says few schools have equity. Females and minority groups must obtain an education in systems that are indifferent and at worst hostile to them. They discover that school psychologically is not a safe environment. Some favor equity of treatment, while others favor equality of outcome. What is good for males may not necessarily be good for females. If there's a choice to be made, educational policy will do what is good for males. Coeducational schools provide a secondary curriculum in social behavior for boys.

Gilligan (1985) cites that the "I win, you lose" philosophy is accepted in schools. Cooperative learning approaches are reinforced by females. Gilligan criticized Kohlberg's research on male moral development because he generalized to females. Females were, therefore, deficient in moral reasoning. High-achieving females receive the least attention of all students. Females do well because they are lucky and work hard, not because they are smart and capable. Curriculum materials enforce the male-exclusive image. Formal leadership belongs to men. In American schools today females are a gender at risk due to blatant sex discrimination.

Sadker & Sadker (1986) researched sexism in the schools for six years. They conclude male students receive more attention and time. Educators are unaware of bias, and equity decreases effectiveness. The experience of female students is unique. What other group starts out ahead in reading, in writing, and even in math but 12 years later finds itself behind? It is time to recognize those who lose ground as a result of their schooling.

According to Marini & Greenberger (1975), boys' educational aspirations and expectations are more strongly linked to social class origins than girls. It is not enough to treat boys from minority groups the same way other pupils are treated. Such boys need special treatment on an individualized basis to bring their reading levels to parity with others (Biddle, Banks, & Good, 1980).

Dwyer (1974) indicates children's sex-role standards for reading account for a significant amount of variance in their reading test scores. In 1980 Yarborough & Johnson compared seventh graders on three measures of intelligence, four measures of achievement, and 20 affective measures. The superior language arts and spelling achievement of girls, along

with affective advantages, may be mistaken as a superior reading skill.

In a study by Steiner (1981), the possibility of the development of a trend away from sex differences in reading achievement and from sex-typing of reading as a feminine activity was noted. The study showed that when reading was regarded as a sex-appropriate behavior by members of both sexes, there was no significant sex difference in reading achievement.

Sex differences in reading ability as measured by tests may be related to cultural differences (Johnson, 1974). In England and Nigeria boys scored higher than girls, while in Canada and the United States girls scored higher than boys. Saario, Tittle, and Jacklin (1972) argued for more flexible and tolerant definitions of sex roles because the nation depends on the talents of all of its members reaching their potential. Lees and Gropper (1972) had noted that future roles of men and women would have a fusion of qualities for the better.

Steinin, Steinin & Newman (1981) had found no significant difference in reading scores for boys and girls. Today we hear inequitable education has been laid to rest (Harvey, 1986). Seventeen researchers

from the United States held a symposium on "Changing Myths about Sex Equity in Education" at the Women in Education Conference, October 1985. The National Center for Educational Statistics reported in 1980 that boys outperformed girls in vocabulary and all but eliminated differences in reading achievement. In contrast, the National Assessment of Educational Progress reported girls outperformed boys in reading. Results are conflicting.

According to Harvey (1986), priorities of the school's energy and resources are toward the academic and behavior problems of boys. Instead of a supportive environment for girls, the school ignores female learning deficits. During the last two decades considerable emphasis has been placed on instructional equity. The assumption is that the objective was accomplished. Actually boys receive more instructional time, praise and criticism than girls. Minority females receive the least amount of attention from teachers.

Women earn half the bachelor's degrees and master's degrees in the United States each year, but the areas of specialization are traditional female low status fields. Men outnumber women in research

universities, graduate, and professional schools (Harvey, 1986). Female students experience a classroom environment that discourages classroom participation, lowers self-esteem, and has a negative effect on their course and career choices. Less than a quarter of elementary principals are female compared to 1928 when over 50% were female.

Educational reform in the eighties has claimed that educational excellence and equity in eduction are not compatible. One is to be achieved at the expense of the other. There is ample evidence that both equity and excellence can be achieved when energy is directed toward making education more effective for all students in ways that promote equity and excellence. Labeling as "excellent" an education that is inequitable is an abuse of the term. A review of men versus women (McLaughlin, 1988) concludes women are different but not inferior. Each sex brings strengths and weaknesses to check and balance the other. Each is one-half of the human whole.

Socioeconomic Status

Socioeconomic status is defined as the position that an individual or family occupies with reference to the average of standards of cultural possessions,

effective income, material possessions, and participation in the community (Chapin, 1928). Traditional indicators of occupation, education, and income are frequently used. Nevertheless, frequent references are found to such factors as presence of reading material in the home. When schools or other aggregated groups are the appropriate unit of analysis, traditional measures of socioeconomic status are usually correlated strongly with academic measures to be useful as a predictor or stratifying variable (White, 1982).

Although socioeconomic status is not a good predictor of individual achievement, it continues to be a strong predictor of school achievement levels. This fact should be recognized and efforts made to provide additional academic support for schools with a high concentration of students from low socioeconomic families (Taylor, 1980).

According to Coleman (1966), schools bring little influence to bear on a child's achievement that is independent of his background. Inequalities imposed on children by their home, neighborhood, and peer environment are carried into adulthood. Taylor (1980) points out that the gross indicators that are usually

utilized in determining socioeconomic status, such as occupation and income, tell little regarding the home environment.

One needs a better description of the family environmental processes that influence reading before a full understanding of the relationship between reading and other socioeconomic factors can be obtained. Children from lower socioeconomic areas do not by third grade overcome their cultural deficiencies, according to Hill and Giamatteo (1979). Their study involved 223 third grade children in western Pennsylvania from two school districts. It investigated the particular phases of reading test scores and socioeconomic status. Scholastic achievement areas reported were effected by socioeconomic factors. A study by Gruiang (1980) found that a strong correlation exists between reading achievement and the educational environment in the home.

Parent practices influence reading achievement of good and poor readers. They are the most significant contributing factor when socioeconomic status and race are taken into account. These practices include lavishing praise, teaching responsibility, and buying

tradebooks (Shields and Dupree, 1983). The works of Keshian (1960), Indehar (1974), and Mayard (1977) found that the number of books in the home has an important influence upon achievement.

Reading activities and proficiency among Hispanics, Blacks, and Whites were measured by NAEP data in 1984 for 4th, 8th and 11th graders. Ortiz (1986) analyzes this data set for socioeconomic indicators that measure the behaviors and attitudes that result from one's background. The data included measures of reading material in the home and the frequency of reading different materials. The results showed that reading activities were found directly to affect the reading proficiency of both minority and non-minority children. The level of reading activities should be increased among all children. Durkin (1982), noted that higher achieving students regularly took books out from the school library and read them at home and school. These students read three to five books per week. Access is enough motivation for some children.

According to Della-Piana (1968), parenting style and home environment have an effect on reading achievement. Parents should be aware of the many

influences of the home and learn how to make them positive and productive. Educators and schools rely on the home for informal teaching, guidance, support, and learning that occurs prior to a child's formal educational program. The home is where most of our learning occurs during the early years.

Chall and Snow (1982) found that children making considerable gains in reading comprehension during the school year were more likely to be those who used trade books outside of reading lessons and regular class time. Ollila and Nurss (1981) noted that the number of books in the home appears to correlate highly with later reading success. Barr and Dreeben (1983) concluded that a moderately strong association exists between out-of-school reading and reading achievement. This relationship is equal to the same magnitude as the strongest relationships reported with in-school use of time. Greaney (1980) lumped magazines together with books and put newspapers into a separate category. The time spent reading from the various choices increased reading proficiency accordingly.

Becoming a Nation of Readers (Anderson, Hiebert, Scott, and Wilkinson, 1985) stated that independent reading is probably a major source of reading fluency.

E.C.I.A. Chapter I

The Educational Consolidation and Improvement Act of 1981 provides remedial reading and math services to students. Funding is provided by the federal government based on income and need (PA Department of Education, 1987). The financial assistance goes to state and local educational agencies to meet the special needs of educationally deprived children. This type of assistance was first provided under Title I of the Elementary and Secondary Education Act of 1965. Chapter I means Chapter I of Title I of the Act. Educationally deprived children means children whose educational attainment is below the level that is appropriate for children of their age. The programs funded must be of sufficient size, scope, and quality to give reasonable promise of substantial progress toward meeting the special educational needs of the children being served.

Chapter I programs must help educationally deprived children to succeed in the regular classroom of the local educational agency. A Chapter I program is not meeting the statutory objectives if it does not help Chapter I children to improve significantly their

performance in regular, non-Chapter I classes. Participating children must also be helped to attain grade level proficiency. A Chapter I program is not adequate unless it helps close the educational gap between Chapter I and non-Chapter I children. Chapter I children must be helped to improve achievements in basic and more advanced skills.

These statutory purposes must guide development of most aspects of local Chapter I projects, including needs assessment, description of objectives, program design, and evaluation. Congress has recognized the need for coordination and mandated instructional coordination with integration of educational programs. Authority is given to integrate Chapter I children with children in other educational programs by providing that local educational agencies may not be restricted to use of particular instructional methods or particular instructional settings.

According to Federal Government regulations of 1965, the local educational agency shall administer a pretest and a posttest separated by approximately 12 months. The test may or may not use national norms. Those without national norms must be accepted by the Secretary of Education. Under identification and

selection procedures, the local educational agency may skip educationally deprived children in greatest need for special assistance if those children are receiving, from non-federal sources, services of the same nature and scope as would otherwise be provided under Chapter I.

According to Plunkett (1985), Chapter I was enacted not as a response to public pressure but as a response to Presidential and Congressional leadership in 1965. President Kennedy noted that man holds in his mortal hands the power to abolish all forms of human poverty. Research had shown the close relationship between conditions of poverty and poor academic achievement. Through the seventies, Congress strengthened and clarified the requirements. In the eighties, the Reagan administration argued that financing education belonged to local and state governments.

The National Association of Educational Progress Report in 1981 stated that the dates from 1970 to 1980 showed that the reading performance of disadvantaged nine year-olds had shown a significant improvement (Stickney, 1985). Many things that happened in the seventies could have dramatically affected student

achievement in reading. The movement that stands out above all others is the effort to improve the education of the economically disadvantaged. Title I with associated national and state efforts probably played a central role in the improvement of reading skills among those who historically performed less well (Forbes, 1985).

Congress changed E.S.E.A. Title I to E.C.I.A. Chapter I. Parent involvement became a weakened component. After the Nation At Risk Report by the National Commission on Excellence in Education, Chapter I received a higher priority. It is important to note that Chapter I funding which fails to keep up with the rate of inflation is sufficient to provide services to only half of eligible children (Plunkett, 1985).

CHAPTER III

METHODS

The following section describes the methodology for this study. This section includes subjects, materials, procedure, design, and statistical analysis.

Subjects

The population of the study consists of all third and fifth grades in Pennsylvania who were administered the T.E.L.S. test as regular classroom students in March, 1987. The population is limited to those with a completed T.E.L.S. test in reading. Only non-categorical student test results are included in the data. This group includes gifted, speech and language-impaired students, and all other students tested. Categorical students were not included in the data. This group includes limited English proficiency students and students of all special education categories except gifted and language-impaired students. The grouping of categorical and non-categorical students was done by each school.

Materials

The reading test to be used for third and fifth grades is the Test for Essential Learning Skills for Pennsylvania for 1987. This is a state criterion-referenced testing program to test student basic reading skills. Objectives cover the following skill areas: vocabulary, literal comprehension, inferential comprehension, life-study and reference. The number of items used to measure each objective varies with tests and across tests from five to two items. A section on the answer sheet related to student performance covering reading material in the home is included in the data as a measure of socioeconomic status (Coleman, 1966).

Reliability was determined by the beta-binomial model estimating the raw agreement index and kappa coefficient from a single test administration (Huynh, 1976). Although the internal consistency estimate of reliability is not the approach of choice for an instrument employing a cut-score to determine "mastery" or "non-mastery," it is included because of familiarity to most practitioners. The statistic used was Kuder Rohardson 20 (KR20). The KR20 index ranged from .92 to .94.

The type of validity of primary concern was content validity for a criterion-referenced test. However, estimates of national comparisons were accomplished by an equating study with the Iowa Test of Basic Skills. Correlations ranged from .75 to .81. Content validity was determined by involving experts in the test development with well-defined test specifications. Content validity was also reinforced by a review of objectives in the Objectives Validation Survey of 1987.

Procedures

The Test for Essential Learning Skills was administered to third and fifth grades as follows:

1. Pennsylvania Department of Education testing division sends tests to district coordinators.
2. District coordinators secure tests until the test date.
3. District coordinators distribute the tests to classroom teachers on the test date. With few exceptions, all students take the test on the same day.
4. Classroom teachers assist students in filling out answer sheets with demographic

data such as sex and race. Race included black, white, Hispanic, Oriental, and other.

5. Classroom teachers administer the test in the regular classroom. No fixed time limits are given.
6. Test materials are collected and returned to district coordinator in a secure manner.
7. District coordinator returns test materials to testing division in department of education for scoring.

Design and Statistical Analysis

The design for this study was descriptive in nature. Because this study utilized all of the population taking the T.E.L.S. test in grades three and five in reading, inferential statistics were not applicable. The following design was be used:

1. Raw scores were arranged on frequency distributions at each grade level for each variable of race, gender, and socioeconomic status with grouping of all scores; scores at or below the cut-score; scores at or below the cut-score that are also designated E.C.I.A. Chapter I.

2. Measures of central tendency were given; means, mode, and median.

In addition, the T.E.L.S. test was a criterion-referenced test with many highs and lows. Because the distribution can be skewed, measures of variability were used. Variability gave a summary description of the spread of performance. The following measures of variability were used: range, inter-quartile range, semi-quartile range, and standard deviation.

To examine the magnitude of difference between two means, a frame of reference must be used. The frame of reference can be provided by comparing the difference to the standard deviation of the variable. One must look at the percent of scores in the higher distribution that exceeds the mean of the lower distribution. Another interpretation is to state the amount of overlap of the two distributions - the percent of scores in one group that could be matched by scores in the other group.

Using the descriptive statistics given, the data was analyzed and interpretations given. Differences according to the variables given were identified. The data will be analyzed for the magnitude of those differences according to the variables.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Chapter Four is the presentation and analysis of data obtained during the study. The study focuses on the third and fifth grade reading results of the 1987 Test for Essential Learning Skills (T.E.L.S.). This data from the Pennsylvania Department of Education was used for the following purposes: (1) to determine a difference and the magnitude of a difference between reading assessment scores and those at or below a cut-score according to selected variables of race, gender, and socioeconomic status; (2) to determine a difference and a magnitude of a difference between reading assessment scores at or below a cut-score and those at or below a cut-score that are also in a federal remedial program of E.C.I.A. Chapter I according to race, gender, and socioeconomic status.

Introduction

This study was a descriptive statistical analysis of the 1987 Pennsylvania Test for Essential Learning Skills in reading. The population of this study consisted of all third and fifth grades in Pennsylvania who were administered the T.E.L.S. test

as regular classroom students in March, 1987. The population was limited to those with a completed T.E.L.S. test in reading. Only non-categorical student test results are included in the data. This group included gifted, speech and language-impaired students. Other students classified in special education categories and limited English proficiency were excluded.

The T.E.L.S. test is a state criterion testing program measuring student basic reading skills. A section on the answer sheet related to student performance covering reading material in the home was included in the data as a measure of socioeconomic status. The design of this study was descriptive in nature, utilizing the entire population taking the test.

In the presentation and analysis of the collected data, the chapter has been organized on grade level according to race, gender, and socioeconomic status to report question results:

1. Difference between the total population reading scores and the reading scores at or below the cut-score.

2. Magnitude of the difference between the total population reading scores and the reading scores at or below the cut-score.
3. Difference between the reading scores at or below the cut-score and those reading scores at or below the cut-score that are also in E.C.I.A. Chapter I.
4. Magnitude of the difference between the reading at or below the cut-score and those reading scores at or below the cut-score that are also in E.C.I.A. Chapter I.

Narrative analysis and statistical summaries for the difference and magnitude of the difference were discussed.

Third Grade

Total Population and Below Cut-Score

Race

The difference between the total population reading scores and the reading scores at or below the cut-score are shown in Table 1 with the selected racial groups. Of the total population, 26,001 (24%) were below the cut-score with 81,197 (76%) above the cut-score. Within the black population, 8,226 (58%)

Table 1

Third Grade

Below (-) and Above (+) Cut-Score Percentages

for Total and Selected Racial Groups

Group	Total N	Below (-) and Above (+)	N	%
Total	107,798	(-)	26,001	24%
		(+)	81,797	76%
Black	14,300	(-)	8,226	58%
		(+)	6,074	42%
Hispanic	2,225	(-)	1,506	68%
		(+)	719	32%
Oriental	1,068	(-)	369	35%
		(+)	699	65%
White	87,513	(-)	14,796	17%
		(+)	72,717	83%
Other	1,054	(-)	295	28%
		(+)	759	72%

were below the cut-score with 6,074 (42%) above the cut-score. Hispanics had 68% below cut-score but Orientals had 35% below the cut-score. Hispanics had 719 (32%) above the cut-score with Orientals having 699 (65%) above the cut-score. Whites had 72,717 (83%) above the cut-score with the black group having 6,074 (42%) above the cut-score.

The magnitude of the difference between the total population reading scores and the reading scores at or below the cut-score is shown in Tables 2, 3, and 4. In Table 2, Blacks, Orientals, Hispanics and "other" groups scored below the total below cut-score mean of 31.71. Whites scored above the below cut-score mean with 34.15. Hispanics and Orientals had similar means and the lowest of all the groups for below the cut-score. For above the cut-score, the total population mean was similar to the means for Orientals and Whites with a 55 score. Blacks had the lowest mean of 52 above the cut-score. The median for the total population below cut-score was 34. Blacks, Hispanics, Orientals and "other" groups scored below that mean. Whites scored 36 above the below cut-score mean. For the above cut-score groups the total population median of 56 was the same for Orientals and Whites. Blacks

Table 2

Third Grade

Below (-) and Above (+) Cut-Score Measures of Central Tendency for Total and Selected Racial Groups

Group	Below (-) and Above (+) Cut-Score	Mn	S.D.	Mdn	Mode
Total	(-)	31.71	9.05	34	43
	(+)	55.15	5.11	56	60
Black	(-)	29.28	9.06	30	43
	(+)	52	5.04	52	50
Hispanic	(-)	26.19	9.93	26	22
	(+)	51.73	5.01	51	47
Oriental	(-)	26.32	11.35	27	43
	(+)	55.22	5.30	56	60
White	(-)	34.15	7.68	36	43
	(+)	55.47	5.01	56	60
Other	(-)	30.55	9.49	32	43
	(+)	54.70	5.14	55	60

scored 52 with Hispanics scoring 51. The mode (43) for all groups except Hispanics was the same as the total population below the cut-score. Hispanics had a mode of 22. The total population mode (60) above the cut-score was the same for all groups except Blacks and Hispanics. Blacks scored 50 and Hispanics scored 47 as a mode.

In Table 3, at the first quartile, all groups except Whites scored below the total below cut-score. At the third quartile, similar results were shown except the "other" group equaled the total score. For the above cut-score, all groups except Blacks and Hispanics equaled the total score at the first and third quartiles. Orientals and Hispanics had the widest interquartile ranges with Whites having the smallest difference.

In Table 4, in the below cut-score group, Hispanics, Orientals and "other" group had the lowest score at 1%. At 5% and 10%, Hispanics and Orientals had the lowest scores. At 90% and 95%, scores are similar with all scores the same at 99% for below cut-score. For above the cut-score all groups were similar at 1% and 99%. At 5% to 95%, Blacks and

Table 3

Third Grade

Below (-) and Above (+) Cut-Score Quartile

Distributions for Total and Selected Racial Groups

Group		Q_1	Q_3	Below (-) and Above (+) Cut-Score $Q_1 - Q_3$	Rg
Total	(-)	25	39	14	43
	(+)	51	59	8	19
Black	(-)	22	37	15	43
	(+)	48	56	8	19
Hispanic	(-)	18	35	17	43
	(+)	47	56	9	19
Oriental	(-)	17	37	20	43
	(+)	51	60	9	19
White	(-)	29	40	11	43
	(+)	52	60	8	19
Other	(-)	23	39	16	43
	(+)	51	59	8	19

Table 4

Third Grade

Below (-) and Above (+) Cut-Score Percentile Distributions for Total and Selected Racial Groups

		Below (-) and Above (+) Cut-Score					
Group		1%	5%	10%	90%	95%	99%
Total	(-)	9	15	18	42	43	43
	(+)	44	46	47	61	62	63
Black	(-)	10	14	17	41	42	43
	(+)	44	44	45	59	60	62
Hispanic	(-)	2	11	14	40	42	43
	(+)	44	44	45	59	60	62
Oriental	(-)	0	5	13	41	43	43
	(+)	44	45	47	61	62	63
White	(-)	13	19	23	42	43	43
	(+)	44	46	48	61	62	63
Other	(-)	6	14	17	42	43	43
	(+)	44	45	47	61	62	63

Hispanics were the lowest for above the cut-score. All other groups were similar.

Gender

The difference between the total population reading scores and the reading scores at or below the cut-score are in Table 5 for gender. Males had 14,041 (26%) below the cut-score, with females having 11,291 (21%) below the cut-score. Females had 41,291 (79%) above the cut-score, with males having 39,327 (74%) above the cut-score.

The magnitude of the difference between the total population reading scores and the reading scores at or below the cut-score according to gender are shown in Tables 6, 7, and 8. The female mean for below and above the cut-score are slightly higher than the male mean for above and below cut-score. In Table 7, the females scored a little higher for above and below the cut-score in the first and third quartiles. In Table 8, from 1% to 10% of females scored a little higher in above and below cut-score with the 90% to 99% scores the same for both groups.

Table 5

Third Grade

Below (-) and Above (+) Cut-Score Percentages for Total Number of Males and Females

Group	Total N	Below (-) and Above (+) N	%
Male	53,368	(-) 14,041	26%
		(+) 39,327	74%
Female	53,212	(-) 11,291	21%
		(+) 41,921	79%

Table 6

Third Grade

Below (-) and Above (+) Cut-Score Measures of Central Tendency for Total Number of Males and Females

Group	Below (-) and Above (+) Mn	S.D.	Mdn	Mode
Male	(-) 31.51	8.98	33	43
	(+) 54.89	5.13	56	60
Female	(-) 32.47	8.59	34	43
	(+) 55.42	5.07	56	60

Table 7

Third Grade

Below (-) and Above (+) Cut-Score Quartile Distributions for Total Number of Males and Females

Group		Q_1	Q_3	$Q_1 - Q_3$	Rg
		Below (-) and Above (+) Cut-Score			
Male	(-)	25	39	14	43
	(+)	51	59	8	19
Female	(-)	27	40	13	43
	(+)	52	60	8	19

Table 8

Third Grade

Below (-) and Above (+) Cut-Score Percentile Distribution for Total Number of Males and Females

Group		1%	5%	10%	90%	95%	99%
		Below (-) and Above (+) Cut-Score					
Male	(-)	10	15	18	42	43	43
	(+)	44	45	47	61	62	63
Female	(-)	11	16	20	42	43	43
	(+)	44	46	48	61	62	63

Socioeconomic Status

For this study, the presence of reading material in the home such as magazines, newspapers, and the number of books (25 or more) is used to determine socioeconomic status.

The difference between the total population reading scores and the reading scores at or below the cut-score according to socioeconomic status is shown in Tables 9 and 10. In Table 9, 65,985 (61%) of homes had newspapers; 60,472 (56%) had magazines; and 92,170 (86%) had 25 or more books at home. Of the homes without reading material, 21,862 (20%) had no newspapers; 25,405 (24%) had no magazines; and 5,445 (5%) had no books (25 or more).

In Table 10, for those scoring below the cut-score, 13,318 (20%) had newspapers compared with 12,370 (20%) who had magazines and 18,469 (20%) who had books. For those scoring above the cut-score, 52,667 (80%) had newspapers; 48,102 (80%) had magazines; and 73,701 (80%) had books (25 or more) in their home.

The magnitude of the difference between the total population reading scores and the reading scores at or below the cut-score according to socioeconomic status

Table 9

Third Grade

Socioeconomic Status Based on Reading Material in the Home for Total Group

Reading Material in Home	N	%
	Newspapers	
Yes	65,985	61%
No	21,862	20%
Don't Know	18,090	17%
	Magazines	
Yes	60,472	56%
No	25,405	24%
Don't Know	20,067	19%
	Books (25 or more)	
Yes	92,170	86%
No	5,445	5%
Don't Know	8,419	8%

Table 10

Third Grade

Below (-) and Above (+) Cut-Score Percentages for Reading Material in Home for Total Group for Socioeconomic Status

Reading Material	Below (-) and Above (+) N	%
Newspapers	(-) 13,318	20%
	(+) 52,667	80%
Magazines	(-) 12,370	20%
	(+) 48,102	80%
Books (25 or more)	(-) 18,469	20%
	(+) 73,701	80%

is shown in Tables 12-17. In Table 11, for the below and above cut-score groups, the mean, median, and mode were equal or almost equal for newspapers, magazines, and books. In Table 12, the first and third quartile scores were the same or almost the same for above and below the cut-score for socioeconomic status based on reading material at home. In Table 13, the percentile distribution was the same or similar for above and below cut-score for all reading materials at home.

In Table 14, the absence of reading material in the home for socioeconomic status shows that 6,426 (29%) scored below the cut-score without newspapers; 7,742 (30%) without magazines; and 3,306 (61%) without books. Of the groups that scored above the cut-score, 15,436 (71%) had no newspapers; 17,663 (70%) had no magazines; and 2,139 (39%) had no books (25 or more) in the home. In Table 15, the means, medians and mode for below and above the cut-score for newspapers and magazines were the same or similar. The absence of books for below cut-score gave a mean of 28.57. The median for books for below and above the cut-score is lower than other groups. The mode for above the cut-score for books is lower than all other groups. In Table 16, for below and above cut-score for first and

Table 11

Third Grade

Below (-) and Above (+) Cut-Score Measures of Central Tendency for Total Group and Reading Materials in Home for Socioeconomic Status

Group	Mn	S.D.	Mdn	Mode
		Newspapers		
Below (-)	32.39	8.58	34	43
Above (+)	55.67	5.05	57	60
		Magazines		
Below Cut (-)	32.38	8.55	34	43
Above Cut (+)	55.60	5.05	57	60
		Books (25 or More)		
Below Cut (-)	32.81	8.38	35	43
Above Cut (+)	55.39	5.05	56	60

Table 12

Third Grade

Below (-) and Above (+) Cut-Score Quartile Distribution for Total Group and Reading Materials in Home for Socioeconomic Status

Group	Q_1	Q_3	$Q_1 - Q_3$	Rg
		Newspapers		
Below Cut (-)	26	40	14	43
Above Cut (+)	52	60	8	19
		Magazines		
Below Cut (-)	26	40	14	43
Above Cut (+)	52	60	8	19
		Books (25 or More)		
Below Cut (-)	27	40	13	43
Above Cut (+)	52	60	8	19

Table 13

Third Grade

Below (-) and Above (+) Cut-Score Percentile Distribution for Total Group and Reading Materials in Home for Socioeconomic Status

Group	1%	5%	10%	90%	95%	99%
Newspapers						
Below Cut (-)	11	16	19	42	43	43
Above Cut (+)	44	46	48	61	62	63
Magazines						
Below Cut (-)	11	16	20	42	43	43
Above Cut (+)	44	46	48	62	62	63
Books (25 or More)						
Below Cut (-)	12	17	20	42	43	43
Above Cut (+)	44	46	48	61	62	63

Table 14

Third Grade

Below (-) and Above (+) Cut-Score Percentages for Absence of Reading Materials in Home for total Group for Socioeconomic Status

Absence of Reading Material	Below (-) and Above (+) N	%
Newspapers	(-) 6,426	29%
	(+) 15,436	71%
Magazines	(-) 7,742	30%
	(+) 17,663	70%
Books (25 or More)	(-) 3,306	61%
	(+) 2,139	39%

Table 15

Third Grade

Below (-) and Above (+) Cut-Score Measures of Central Tendency for Total Group and Absence of Reading Materials in Home for Socioeconomic Status

Group	Mn	S.D.	Mdn	Mode
		Newspapers		
Below Cut (-)	31.58	9.01	34	43
Above Cut (+)	54.46	5.14	55	57
		Magazines		
Below Cut (-)	31.60	8.92	34	43
Above Cut (+)	54.14	5.16	55	57
		Books (25 or More)		
Below Cut (-)	28.57	9.58	29	43
Above Cut (+)	51.53	4.88	51	51

Table 16

Third Grade

Below (-) and Above (+) Cut-Score Quartile Distributions for Total Group and Absence of Reading Material in Home for Socioeconomic Status

Group	Q_1	Q_3	$Q_1 - Q_3$	Rg
		Newspapers		
Below (-)	25	39	14	43
Above (+)	51	59	8	19
		Magazines		
Below (-)	25	39	14	43
Above (+)	50	58	8	19
		Books (25 or More)		
Below (-)	21	37	16	43
Above (+)	47	55	8	19

third quartiles for newspapers and magazines were the same or similar. The absence of books for above and below cut-score gave lower first and third quartiles for above and below cut-score. In Table 17, for above and below cut-score percentiles for newspapers and magazines are equal or similar. The below cut-score and above cut-score group without books scored lower in percentiles for most of the distribution shown.

Total Below Cut-Score with E.C.I.A. Chapter I Below Cut-Score

The difference between the reading scores at or below the cut-score and those reading at or below the cut-score that are also in E.C.I.A. Chapter I for the total population below is shown in Table 18. In Table 18, 26,001 scored below the cut-score with 9,297 (36%) with E.C.I.A. Chapter I below the cut-score and 16,704 (64%) without E.C.I.A. Chapter I below the cut-score.

The magnitude of the difference between the two groups for the total population below is shown in Tables 19, 20, and 21. In Table 19, the group with E.C.I.A. Chapter I scored below the mean, median, and mode for the total population below. The group with E.C.I.A. Chapter I scored above and/or below equal in

Table 17

Third Grade

Below (-) and Above (+) Cut-Score Percentile Distribution for Total Group and Absence of Reading Material in Home for Socioeconomic Status

Group	1%	5%	10%	90%	95%	99%
			Newspapers			
Below (-)	10	15	18	42	43	43
Above (+)	44	45	47	61	62	63
			Magazines			
Below Cut (-)	10	15	18	42	43	43
Above Cut (+)	44	45	47	61	62	63
			Books (25 or More)			
Below Cut (-)	7	13	16	41	43	43
Above Cut (+)	44	44	45	58	60	62

Table 18

Third Grade

Below Cut-Score Percentage for Below Cut-Score Total Population (Pop.) With and Without E.C.I.A. Chapter I

Total Below	E.C.I.A. Chapter I	Total Pop. Below N	%
26,001	With	9,297	36%
	Without	16,704	64%

Table 19

Third Grade

Below Cut-Score Measures of Central Tendency for Total Below Cut-Score Population (Pop.) With and Without E.I.C.A. Chapter I (Chapt. I)

Measure	Total Below Cut-Score	E.C.I.A. Chapter I With	Without
Mn	31.71	30.99	32.11
S.D.	9.05	8.56	9.29
Mdn	34	32	35
Mode	43	42	43

mean, median and mode to the total population below. In Table 20, in the first quartile, the E.C.I.A. Chapter I group was equal to the total below cut-score, but lower in the third quartile. The group without Chapter I scored above the total below cut-score in the first and third quartiles. In Table 21, the group with Chapter I scored above the total below at 1%, 5%, and 10%. The group without Chapter I scored lower at 1%, but equal to scores at 5% and 10% for the total below. For 90% to 99%, all scores with and without Chapter I were the same as the total below.

Race

The difference between the reading scores at or below the cut-score and those reading scores at or below the cut-score that are also in E.C.I.A. Chapter I is shown in Table 22 according to races. In the Black group, 2,203 (8%) of the group with E.C.I.A. Chapter I scored below compared to 6,023 (23%) of the group with E. C.I.A. Chapter I who scored below. Of the total Black population below, 15% with Chapter I scored below and 42% without Chapter I scored below. Hispanics and Orientals scored the lowest with or without Chapter I for the group below. Whites scored

Table 20

Third Grade

Below Cut-Score Quartile Distribution for Total Below Cut-Score Population (Pop.) With and Without E.C.I.A. Chapter I

Measure	Total Below Cut-Score	E.C.I.A. Chapter I With	Without
Q_1	25	25	26
Q_3	39	38	40
$Q_1 - Q_3$	14	13	14
Rg	43	43	43

Table 21

Third Grade

Below Cut-Score Percentile Distribution for Total Below Cut-Score Population (Pop.) With and Without E.C.I.A. Chapter I

Measure	Total Below Cut-Score	E.C.I.A. Chapter I With	Without
1%	9	11	4
5%	15	16	15
10%	18	19	18
90%	42	42	42
95%	43	43	43
99%	43	43	43

Table 22

Third Grade

Below Cut-Score Percentages for Below Cut-Score Selected Racial Groups With and Without E.C.I.A. Chapter I and Total Racial Population (Pop.)

Group	E.C.I.A. Chapter I N	Group Below %	Total Racial Pop. Below %
Black			
With	2203	8%	15%
Without	6023	23%	42%
Hispanic			
With	573	2%	26%
Without	933	4%	42%
Oriental			
With	116	.4%	11%
Without	253	.9%	24%
White			
With	6268	24%	7%
Without	8528	33%	10%
Other			
With	76	.2%	7%
Without	219	.8%	21%

the highest with 6,268 (24%) with Chapter I and 8,528 (33%) without Chapter I below. In the total White population below, 7% with Chapter I and 10% without Chapter I scored below. In the total Hispanic population below, 26% with Chapter I and 42% without Chapter I scored below. In the total Oriental population below, 11% with Chapter I and 24% without Chapter I scored below.

The magnitude of the difference between the reading scores at or below the cut-score and those reading scores at or below the cut score that are also in E.C.I.A. Chapter I according to race is shown in Tables 23, 24, and 25. In Table 23, the group with Chapter I had Hispanics with a mean of 25.3 and Orientals with a mean of 24.77 compared to Blacks with 28.01 and Whites with 32.74. For the group without Chapter I, Hispanics and Orientals had the lowest mean compared to Blacks with 29.75 and Whites with 35.20. The same results were repeated for medians in all groups. In mode with Chapter I, the Orientals had a score of 15 compared to Whites with 43 and Blacks with 23. Without Chapter I, all racial groups were about the same. In Table 25, Hispanics and Orientals had the lowest scores at 1% and 5% with and without

Table 23

Third Grade

Below Cut-Score Measures of Central Tendency for Below Cut-Score Selected Racial Groups With and Without E.C.I.A. Chapter I

			E.C.I.A. Chapter I	
Group	Mn	S.D.	Mdn	Mode
Black				
With	28.01	8.91	28	23
Without	29.75	9.07	31	43
Hispanic				
With	25.30	9.02	25	22
Without	26.74	10.42	27	42
Orientals				
With	24.77	10.64	25	15
Without	27.04	11.61	28	43
White				
With	32.74	7.71	34	43
Without	35.20	7.48	37	43
Other				
With	25.58	8.86	27	27
Without	31.58	9.51	33	43

Table 24

Third Grade

Below Cut-Score Quartile Distribution for Below Cut-Score Selected Racial Groups With and Without E.C.I.A. Chapter I

Group	Q_1	Q_3	E.C.I.A. Chapter I $Q_1 - Q_3$	Rg
Black				
With	21	35	14	43
Without	23	38	15	43
Hispanic				
With	18	32	14	43
Without	18	36	18	43
Oriental				
With	17	34	17	42
Without	18	37	19	43
White				
With	27	39	12	36
Without	31	41	10	43
Other				
With	20	36	16	33
Without	25	40	15	43

Table 25

Third Grade

Below Cut-Score Percentile Distribution for Below Cut-Score Selected Racial Groups With and Without E.C.I.A. Chapter I

			E.C.I.A. Chapter I			
Group	1%	5%	10%	90%	95%	99%
Black						
With	10	14	16	40	42	43
Without	10	15	17	41	43	43
Hispanic						
With	5	12	14	39	41	43
Without	1	11	13	41	42	43
Oriental						
With	1	6	13	39	41	43
Without	0	0	13	41	43	43
White						
With	13	18	21	42	43	43
Without	13	20	24	43	43	43
Other						
With	9	12	16	39	40	42
Without	2	15	18	43	43	43

Chapter I. At 5%, scores for Hispanics, Orientals and Whites without Chapter I were lower than those with Chapter I. For the rest of the distribution, all groups without Chapter I scored higher than those with Chapter I except for Hispanics at 10%. At 90%, the Blacks, Orientals, and Hispanics had the same score without Chapter I. Hispanics and Orientals were still lower than other groups with Chapter I at 90% and 95%.

Gender

The difference between the reading scores at or below the cut-score and those reading scores at or below the cut-score that are also in E.C.I.A. Chapter I, according to gender is shown in Table 26. With Chapter I, 5,337 (21%) of the males were below cut-score for the group, with 38% for the total gender population below. Females had 3,921 (35%) of the group below with 35% of the total gender population below. Without Chapter I, 8,704 (62%) of the males were below cut-score for the group with 62% of the total gender population below. Females had 7,370 (28%) of the group below, with 65% of the total gender population below.

The magnitude of the difference between the reading at or below the cut-score and those reading

Table 26

Third Grade

Below Cut-Score Percentages for Below Cut-Score Gender Groups With and Without E.C.I.A. Chapter I and Total Gender Population (Pop.)

Group	E.C.I.A. Chapter I N	Group Below %	Total Gender Pop. Below %
Male			
With	5337	21%	38%
Without	8704	33%	62%
Female			
With	3921	15%	35%
Without	7370	28%	65%

scores at or below the cut-score that are also in E.C.I.A. Chapter I is shown in Tables 27, 28 and 29. In Table 27, females had a higher mean and median than males with Chapter I and without Chapter I. The mode for groups with and without Chapter I was the same accordingly. In Table 28, in the first quartile the "without" Chapter I group scored higher for males and females than the "with" Chapter I group. Females scored higher than males in the first quartile. In the third quartile, males had the same score for with and without Chapter I. Females scored the same as males for the group with Chapter I, but higher for the group without Chapter I. In Table 29, for males with Chapter I the scores were higher at 1% and 5% than those without Chapter I. For females, the same held true at the 1% mark. At 5%, females scored equally for "without and with" Chapter I. In fact, for the rest of the distribution, all groups - male and female - with or without Chapter I, scored the same or almost the same as each other.

Socioeconomic Status

The difference between the reading scores at or below the cut-score and those reading scores at or below the cut-score that are also in E.C.I.A.

Table 27

Third Grade

Below Cut-Score Measures of Central Tendency

for Below Cut-Score Gender Groups With

and Without E.C.I.A. Chapter I

			E.C.I.A. Chapter I	
Group	Mn	S.D.	Mdn	Mode
Male				
With	30.69	8.66	32	42
Without	32.01	9.14	34	43
Female				
With	31.48	8.35	33	42
Without	33.00	8.66	35	43

Table 28

Third Grade

Below Cut-Score Quartile Distributions for

Below Cut-Score Gender Groups With and

Without E.C.I.A. Chapter I

			E.C.I.A. Chapter I	
Group	Q_1	Q_3	$Q_1 - Q_3$	Rg
Male				
With	24	38	14	43
Without	26	38	12	43
Female				
With	26	38	12	43
Without	27	40	13	43

Table 29

Third Grade

Below Cut-Score Percentile Distribution for

Below Cut-Score Gender Groups With and

Without E.C.I.A. Chapter I

	E.C.I.A. Chapter I					
Group	1%	5%	10%	90%	95%	99%
Male						
With	11	16	18	41	42	43
Without	10	15	18	42	43	43
Female						
With	12	16	19	42	43	43
Without	11	16	20	42	43	43

Chapter I according to socioeconomic status is shown in Table 30. With E.C.I.A. Chapter I, 9,297 (36%) scored below the cut-score with 16,707 (64%) without E.C.I.A. Chapter I below the cut-score. Over 50% to 71% of the homes had newspapers, magazines, and books but this group scored below the cut-score. Of those below the cut-score, 25% were without newspapers, 30% without magazines, and 13% without books.

The magnitude of the difference between reading at or below the cut-score and those reading scores at or below the cut-score that are also in E.C.I.A. Chapter I according to sociceconomic status is shown in Tables 31, 32, and 33. In Table 31, the mean for the group with Chapter I was higher than the group without Chapter I and the means for all the reading materials in the home. Newspapers, magazines, and books had about the same mean. For those without newspapers and magazines, the means were about equal. Those without books had a lower mean than all groups. The median for those with Chapter I was higher than all other groups. The median without Chapter I was higher than the median for newspapers and magazines. The median without books was the same as the median

Table 30

Third Grade

Below Cut-Score Percentages for Groups With and Without E.C.I.A. Chapter I and Socioeconomic Status Based on Reading Materials in the Home

Group	N	Below Cut-Score %
E.C.I.A. Chapter I		
With	9,297	36%
Without	16,707	64%
Newspapers		
Yes	13,318	51%
No	6,426	25%
Magazines		
Yes	12,370	48%
No	7,742	30%
Books (25 or more)		
Yes	18,469	71%
No	3,306	13%

Table 31

Third Grade

Below Cut-Score Measures of Central Tendency for Groups With and Without E.C.I.A. Chapter I and Socioeconomic Status Based on Reading Materials in the Home

			Below Cut-Score	
Group	Mn	S.D.	Mdn	Mode
E.C.I.A. Chapter I				
With	34.97	7.84	36	43
Without	32.11	9.29	35	43
Newspapers				
Yes	32.39	8.58	34	43
No	31.58	9.01	34	43
Magazines				
Yes	32.38	8.55	34	43
No	31.60	8.92	34	43
Books				
Yes	32.81	8.38	35	43
No	28.57	9.58	29	43

without Chapter I. The mode for all groups was the same.

In Table 32, in the first quartile, those with Chapter I had the highest score. Those without Chapter I matched the scores of those with newspapers and magazines. Those with books scored a little higher, but had the lowest score for all groups. In the third quartile, those without and with newspapers and magazines scored the same accordingly. The Chapter I group had the highest score, and match the highest score for other groups with the "without" Chapter I group. The group without books scored the lowest in the third quartile.

In Table 33, those with Chapter I and reading material scored higher than those without Chapter I and reading material in the home. At 1% and 5%, newspapers and magazines had the same scores accordingly. The E.C.I.A. Chapter I group had the highest score and the lowest score for the group with Chapter I. The group without books also scored low. In the 5% and 10% area, E.C.I.A. Chapter I had the highest score and the group without books had the lowest score. Groups with newspapers and magazines matched the group without Chapter I at the 10% mark.

Table 32

Third Grade

Below Cut-Score Quartile Distribution for Groups With and Without E.C.I.A. Chapter I and Socioeconomic Status Based on Reading Material in the Home

Group	Below Cut-Score			
	Q_1	Q_3	$Q_1 - Q_3$	Rg
E.C.I.A. Chapter I				
With	30	41	11	46
Without	26	40	14	43
Newspapers				
Yes	26	40	14	43
No	25	39	14	43
Magazines				
Yes	26	40	14	43
No	25	39	14	43
Books				
Yes	27	40	13	43
No	21	37	16	43

Table 33

Third Grade

Below Cut Score Percentile Distribution for Groups With and Without E.C.I.A. Chapter I and Socioeconomic Status Based on Reading Material in the Home

	Below Cut-Score					
Group	1%	5%	10%	90%	95%	99%
E.C.I.A. Chapter I						
With	15	21	24	44	45	46
Without	4	15	18	42	43	43
Newspapers						
Yes	11	16	19	42	43	43
No	10	15	18	42	43	43
Magazines						
Yes	11	16	20	42	43	43
No	10	15	18	42	43	43
Books						
Yes	12	17	20	42	43	43
No	7	13	16	41	43	43

At 90%, E.C.I.A. Chapter I group had the highest score and the group without Chapter I matched the scores of the groups. Books were the exception with the lowest score. At 95% and 99%, scores were almost the same except for the higher scores with the Chapter I group.

Fifth Grade

Total Population and Below Cut-Score

Race

The difference between the total population reading scores and the reading scores at or below the cut-score are shown in Table 34 with the selected racial groups.

For the at or below the cut-score group in Table 34, 27,464 (27%) were below the cut-score with 75,043 (73%) above the cut-score. Racial groups analyzed showed that 16,757 (20%) of the White population scored below the cut-score compared to 27,464 (27%) below for the total population.

The next racial group of Orientals had 361 (33%) below the cut-score. This percentage is higher than the total population. Hispanics showed 1,359 (69%) below the cut-score. This is noticeably higher than the Oriental, White, and miscellaneous groups. The

Table 34

Fifth Grade

Below (-) and Above (+) Cut-Score Percentages

for Total and Selected Racial Groups

Group	Total N	Below (-) and Above (+) N	%
Total	102,507	(-) 27,464	(-) 27
		(+) 75,043	(+) 73
Black	12,507	(-) 8,003	(-) 64
		(+) 4,504	(+) 36
Hispanic	1,975	(-) 1,359	(-) 69
		(+) 616	(+) 31
Oriental	1,102	(-) 361	(-) 33
		(+) 741	(+) 67
White	84,633	(-) 16,757	(-) 20
		(+) 67,876	(+) 80
Other	1,228	(-) 418	(-) 34
		(+) 810	(+) 66

Black group showed 8,003 (64%) below the cut-score. This is not as high as the Hispanic group. The two groups formed all other racial groups with 418 (34%) below the cut-score.

Black and Hispanic groups had higher percentages below the cut-score than the total population. Whites had a lower percentage compared to the other racial groups. The White population (84,663) outnumbered the Black population (12,507). The White group numbers had 16,751 (20%) below the cut-score and below the total population below the cut-score.

For the group above the cut-score, 67,876 (80%) of the White group scored and 741 (67%) of the Oriental population scored above the cut-score. All other racial groups scored two-thirds above. More than half of the Orientals and "other" racial groups scored above the cut-score. More than three-fourths of the Whites scored above the cut-score. About one-third of the Black and Hispanic groups scored above the cut.

The magnitude of the difference between the total population reading scores is shown in Tables 35, 36, and 37. In Table 35, the total population had a mean of 36.46. Below the cut-score, the Hispanic and

Table 35

Fifth Grade

Below (-) and Above (+) Cut-Score Measures of Central Tendency for Total and Selected Racial Groups

		Below (-) and Above (+) Cut Score			
Group		Mn	S.D.	Mdn	Mode
Total	(-)	36.46	8.18	38	46
	(+)	57.79	5.42	58	62
Black	(-)	33.84	8.47	35	45
	(+)	54.32	5.06	54	49
Hispanic	(-)	31.71	9.51	33	39
	(+)	54.38	5.01	54	47
Oriental	(-)	31.85	11.7	35	46
	(+)	58.73	5.52	60	63
White	(-)	38.41	6.94	40	46
	(+)	58.04	5.35	59	62
Other	(-)	35.93	8.21	38	46
	(+)	57.52	5.41	58	60

Oriental groups had similar means of 31. This was below the total population. All "other" racial groups scored 35.93, which was not far below the total population mean. Whites scored 38.41 for a mean which was higher than the total population mean and all other racial groups. Blacks had a higher mean than the Hispanics and Orientals, but noticeably lower than the White and total population mean.

The standard deviation (S.D.) for the Oriental group was higher due to a wider range on individual scores. Due to a smaller range of scores, the standard deviation (S.D.) for the Whites was lower.

Blacks and Orientals had the same median score which was below the median of the total population. The Hispanic group had the lowest median with the White group having the highest median of all groups below the cut. Whites had a higher median than the total population. All "other" racial groups scored equal to the total population median.

Mode for the Orientals, Whites, and "other" racial groups was equal to the total population made. This score was 46, as the most frequent score achieved and is borderline to the cut-score of 47. Blacks were

only one point away with 45. Hispanics were noticeably lower with 39.

For above the cut-score, mean and median for Orientals, Whites and "other" racial groups were equal to or above the same for the total population. The mode was equal or above for Orientals and Whites. The mean, median, and mode was noticeably lower for Blacks and Hispanics compared to the total population and other racial groups.

In Table 36, Orientals for below the cut-score had the widest range with the lowest score in the first quartile with a third quartile score close to the total population. Hispanics had low scores in the first quartile and lower scores in the third quartile than other groups. Whites had higher first and third quartile scores than the total population and all other groups. The range was the smallest. Blacks and all "other" racial groups were lower than the first quartile for the total population. All "other" racial groups were equal to the total population in the third quartile.

Blacks, Hispanics and Orientals scored lower than other groups and total population in the first quartile. In the third quartile, Whites, "other"

Table 36

Fifth Grade

Below (-) and Above (+) Cut-Score Quartile Distribution for Total and Selected Racial Groups

Group	Below (-) and Above (+) Cut-Score	Q_1	Q_3	$Q_1 - Q_3$	Rg
Total	(-)	32	43	11	46
	(+)	54	62	8	20
Black	(-)	28	41	13	46
	(+)	50	58	8	20
Hispanic	(-)	25	39	14	46
	(+)	50	58	8	20
Oriental	(-)	23	42	19	46
	(+)	55	63	8	20
White	(-)	35	44	9	46
	(+)	54	62	8	20
Other	(-)	30	43	13	37
	(+)	54	62	8	20

racial groups, and Orientals scored closely to the total population third quartile. Hispanics scored the lowest in the third quartile.

For the above-cut group, the first and third quartile scores for Orientals, Whites, and "other" racial groups were equal and/or similar to those for the total population. The first and third quartile ranges for Blacks and Hispanics were the same and noticeably lower than the total population and all other groups given. Orientals, Whites, and "other" racial groups scored higher than Blacks and Hispanics.

In Table 37, for below the cut-score only Hispanics and Orientals had extremely low scores at the first percent and below the total population scores. At the 5% range, all groups except Whites and all "other" racial groups scored below the total population for the 10% level. Orientals and Hispanics scored lower at 90% and above, all scores were equal or similar to the total population scores. At the 99%' level, all groups scored at the same level. The scores were similar closer to the cut-score.

For above the cut-score in Table 37, in the first percentile all scores were equal to the total population. At all other percentiles, Blacks and

Table 37

Fifth Grade

Below (-) and Above (+) Cut-Score Percentile Distribution for Total and Selected Racial Groups

Group		Below (-) and Above (+) Cut-Score					
		1%	9%	10%	90%	95%	99%
Total	(-)	13	21	25	45	46	46
	(+)	47	48	50	65	66	67
Black	(-)	13	19	22	44	45	46
	(+)	47	47	48	62	63	66
Hispanic	(-)	5	16	19	44	45	46
	(+)	47	47	48	62	63	66
Oriental	(-)	0	11	17	45	46	46
	(+)	47	48	50	65	66	67
White	(-)	18	25	29	45	46	46
	(+)	47	48	50	65	66	67
Other	(-)	13.4	21	24	45	46	46
	(+)	47	48	49	64	65	67

Hispanics had the same scores under the total population scores. Orientals and Whites at all other percentages were the same as the total population. All "other" racial groups were a point lower than the total population at percentages above 10%. Scores in the 1% to 10% range stayed similar for all groups. At the upper percentages, Blacks and Hispanics did not score as high as the other groups.

Gender

The difference between the total population reading scores and the reading scores at or below the cut-score are shown in Table 38 with total number of males and females. Of the 50,778 males who took the test, 13,807 (27%) scored at or below the cut-score with 36,971 (72%) above the cut-score. Of the 51,006 females who took the test, 13,230 (26%) scored at or below the cut-score with 37,776 (74%) above the cut-score. Numbers below and above the cut-score for males and females do not vary widely.

The magnitude of the difference between the total population reading scores and the reading scores at or below the cut-score according to gender is shown in Tables 39, 40, and 41. For males and females below

Table 38

Fifth Grade

Below (-) and Above (+) Cut-Score Percentages

for Total Number of Males and Females

		Below (-) and Above (+)		
Group	Total N		N	%
Male	50,778	(-)	13,807	27%
		(+)	36,971	72%
Female	51,006	(-)	13,230	25%
		(+)	37,776	74%

Table 39

Fifth Grade

Below (-) and Above (+) Cut-Score Measures of Central

Tendency for Total Number of Males and Females

		Below (-) and Above (+)		
Group	Mn	S.D.	Mdn	Mode
Male	(-) 36.12	8.36	38	46
	(+) 57.86	5.42	58	63
Female	(-) 37.04	7.68	39	46
	(+) 57.72	5.42	58	62

Table 40

Fifth Grade

Below (-) and Above (+) Cut-Score Quartile

Distribution for Total Number

of Males and Females

		Below (-) and Above (+) Cut-Score			
Group		Q_1	Q_3	$Q_1 - Q_3$	Rg
Male	(-)	31	43	12	46
	(+)	54	62	8	20
Female	(-)	33	43	10	46
	(+)	53	62	9	20

Table 41

Fifth Grade

Below (-) and Above (+) Cut-Score Percentile Distribution for Total Number of Males and Females

Group		Below (-) and Above (+) Cut-Score					
		1%	5%	10%	90%	95%	99%
Male	(-)	13	20	24	45	46	46
	(+)	47	48	50	65	66	67
Female	(-)	15	22	26	45	46	46
	(+)	47	48	50	65	66	67

the cut-score in Table 39, males had a 36.12 mean with a 37.04 mean for females. Medians for both groups were very similar. Males had a 38 median with a 39 median for females. The mode at 46 was the same for male and female. For above the cut-score, the male mean was 57.86 and the female mean was 57.72. The median for both groups was the same with the male mode at 63 and the female mode at 62.

In Table 40, in the first quartile below the cut-score, females scored 33 with males at 31. In the third quartile, males and females scored the same above and below the cut-score. For above the cut-score in the first quartile, females scored 54 with males scoring 54.

In Table 41, for below the cut-score, from 1% to 10% females scored a little higher but from 90% to 99% scores were the same for both groups. Above the cut-score, males and females were equal in the percentile distribution.

Socioeconomic Status

For this study, the presence of reading material in the home such as magazines, newspapers, and the

number of books (25 or more) is used to determine socioeconomic status.

The difference between the total population reading scores and the reading scores at or below the cut-score according to socioeconomic status is shown in Tables 42 and 43. In Table 42, 72,889 (71%) homes have newspapers; 66,772 (65%) had magazines; and 93,534 (91%) had books. Of the homes without reading material, 20,432 (20%) had no newspapers; 22,390 (22%) had no magazines; and 2,707 (3%) had no books.

In Table 43, for those scoring at or below the cut-score, 16,449 (23%) had newspapers compared with 14,008 (21%) who had magazines and 22,423 (24%) had books. For those scoring above the cut-score, 56,440 (77%) had newspapers; 52,764 (79%) had magazines; 71,111 (76%) had books in their home.

The magnitude of the difference between the total population reading scores and the reading scores at or below the cut-score according to socioeconomic status with reading materials in the home is shown in Tables 44 to 46. At or below the cut-scores, those with newspapers had a mean of 37.24; those with magazines had a mean of 37.22; those with books had a mean of 37.18. All the means were very similar. All three

Table 42

Fifth Grade

Socioeconomic Status Based on Reading Material in the Home for Total Group

Reading Material in Home	N	%
	Newspapers	
Yes	72,889	71%
No	20,432	20%
Don't Know	7,963	8%
	Magazines	
Yes	66,772	65%
No	22,390	22%
Don't Know	11,988	12%
	Books	
Yes	93,534	91%
No	2,707	3%
Don't Know	4,917	5%

Table 43

Fifth Grade

Below (-) and Above (+) Cut-Score Percentages for Reading Material in Home for Total Group for Socioeconomic Status

Reading Material	Below (-) and Above (+) N	%
Newspapers	(-) 16,449	23%
	(+) 56,440	77%
Magazines	(-) 14,008	21%
	(+) 52,764	79%
Books (25 or more)	(-) 22,423	24%
	(+) 71,111	76%

Table 44

Fifth Grade

Below (-) and Above (+) Cut-Score Measures of Central Tendency for Total Group and Reading Materials in Home for Socioeconomic Status

Group	Mn	S.D.	Mdn	Mode
		Newspapers		
Below Cut (-)	37.24	7.61	39	46
Above Cut (+)	58.16	5.37	59	62
		Magazines		
Below Cut (-)	37.22	7.69	39	46
Above Cut (+)	58.41	5.34	59	63
		Books (25 or more)		
Below Cut (-)	37.18	7.66	39	46
Above Cut (+)	57.93	5.39	59	62

reading materials had a median of 39, and a mode of 46. For the above cut-score group, those with newspapers had a mean of 58.16, those with magazines had a mean of 58.41, and those with books had a mean of 57.93. A median of 59 and a mode of 62 were almost the same in all groups above the cut-score. Students who had newspapers and magazines scored a little higher mean above the cut-score to students who had books.

In Table 45, the quartile distribution for all three sources of reading materials in the home were exactly the same with first quartile - 33, and the third quartile - 43, for the below the cut-score. For above the cut-score, the first quartile - 33, was exactly the same for all three sources. The above cut-score book group had 62 in the third quartile, compared to 63 in the third quartile for newspapers and magazines.

In Table 46, the first percentile distribution for below the cut-score group was 15 for newspapers, 16 for magazines and books. The fifth percentile was the same for books and magazines at 22, with newspapers at 23. From the 10% to the 99%, the distribution for all three sources was the same. For

Table 45

Fifth Grade

Below (-) and Above (+) Cut-Score Quartile Distribution for Total Group and Reading Materials in Home for Socioeconomic Status

Group	Q_1	Q_3	$Q_1 - Q_3$	Rg
		Newspapers		
Below Cut (-)	33	43	10	46
Above Cut (+)	54	63	9	20
		Magazines		
Below Cut (-)	33	43	10	46
Above Cut (+)	54	63	9	20
		Books (25 or more)		
Below Cut (-)	33	43	10	46
Above Cut (+)	54	62	8	20

Table 46

Fifth Grade

Below (-) and Above (+) Cut-Score Percentile Distribution for Total Group and Reading Materials in Home for Socioeconomic Status

Group	1%	5%	10%	90%	95%	99%
Newspapers						
Below Cut (-)	15	23	26	45	46	46
Above Cut (+)	47	48	50	65	66	67
Magazines						
Below Cut (-)	16	22	26	45	46	46
Above Cut (+)	47	49	50	65	66	67
Books (25 or more)						
Below Cut (-)	16	22	26	45	46	46
Above Cut (+)	47	49	50	65	66	67

the above the cut-score group, the first percentile at 47 was the same for all groups. The fifth percentile at 49 was the same for books and magazines, with newspapers at 48. The rest of the distribution for all three sources was exactly the same.

In Tables 47 to 50, the absence of reading material with below and above cut-score is shown. For below the cut-score, 6,930 (34%) were without newspapers; 8,651 (39%) were without magazines; and 1,831 (68%) were without books. For the above cut-score, 13,502 (61%) were without newspapers; 13,739 (61%) were without magazines; and 876 (32%) were without books. It should be noted that only 32% of the students scored above the cut-score without books while more than 60% scored above without newspapers and magazines.

In Table 48, the mean for the below cut-score group for absence of newspapers and magazines is exactly the same - 36.09. The mean for below cut-score without books is lower at 32.41. Medians (38) and mode (45) are also the same for groups without newspapers and magazines. The median for the group without books below the cut-score is lower at 33. For the above the cut-score group, the mean for absence

Table 47

Fifth Grade

Below (-) and Above (+) Cut-Score Percentages for Absence of Reading Materials in Home for Total Group for Socioeconomic Status

Absence of Reading Material	Below (-) and Above (+)	N	%
Newspapers	(-)	6,930	34
	(+)	13,502	61
Magazines	(-)	8,651	39
	(+)	13,739	61
Books	(-)	1,831	68
	(+)	876	32

Table 48

Fifth Grade

Below (-) and Above (+) Cut-Score Measures of Central Tendency for Total Group and Absence of Reading Materials in Home for Socioeconomic Status

Group	Mn	S.D.	Mdn	Mode
		Newspapers		
Below Cut (-)	36.09	8.32	38	45
Above Cut (+)	56.84	5.40	57	61
		Magazines		
Below Cut (-)	36.09	8.15	38	45
Above Cut (+)	56.07	5.25	56	58
		Books (25 or more)		
Below Cut (-)	32.41	9.26	33	45
Above Cut (+)	54.16	5.07	53	50

of newspapers (56.84) and the mean for absence of magazines (56.07) are similar compared to the mean for absence of books (54.16). The above cut group without newspapers had a median (57) and mode (61) higher than the group without magazines. The group without books had a lower median (53) and a lower mode (50) than the other groups.

In Table 49, the below the cut-score groups without newspapers and magazines had the equal quartile distributions. The group without books scored lower in the first quartile (26) and the third quartile (40). For the above the cut group, the quartile distribution was almost the same for those without newspapers and magazines. The group without books was lower in the first and third quartile than the other groups.

In Table 50, the below the cut-score groups without newspapers and magazines were almost the same in percentile distributions. The group without books was lower in the first, fifth and tenth percentile. For the above the cut-score, the group without newspapers had a little higher percentile distribution in the 90th and 99th percentiles than the group without magazines. The group without books had a

Table 49

Fifth Grade

Below (-) and Above (+) Cut-Score Quartile Distribution for Total Group and Absence of Reading Material in Home for Socioeconomic Status

Group	Q_1	Q_3	$Q_1 - Q_3$	Rg
		Newspapers		
Below Cut (-)	31	43	12	46
Above Cut (+)	52	61	9	20
		Magazines		
Below Cut (-)	31	43	12	46
Above Cut (+)	52	60	8	20
		Books		
Below Cut (-)	26	40	14	46
Above Cut (+)	50	58	8	20

Table 50

Fifth Grade

Below (-) and Above (+) Cut-Score Percentile Distribution for Total Group and Absence of Reading Material in Home for Socioeconomic Status

Group	1%	5%	10%	90%	95%	99%
Newspapers						
Below Cut (-)	13	20	24	45	46	46
Above Cut (+)	47	48	49	64	65	67
Magazines						
Below Cut (-)	13	21	24	45	46	46
Above Cut (+)	47	48	49	63	65	66
Books						
Below Cut (-)	5	17	20	44	45	46
Above Cut (+)	47	47	48	62	63	65

lower distribution from the 5th to the 99th percentile than the other groups.

Below Cut-Score E.C.I.A. Chapter I

The difference between the reading scores at or below the cut-score and those reading scores at or below the cut-score that are also in E.C.I.A. Chapter I are shown in Table 51. Of the 27,464 who scored below the cut-score, 9,038 (33%) received Chapter I services, with 18,426 (67%) below the cut-score without Chapter I services.

The magnitude of the difference between the reading scores at or below the cut-score and those reading scores at or below the cut-score that are also in E.C.I.A. Chapter I is shown in Tables 52, 53, and 54. In Table 52, the total below cut-score had a mean of 36.46 compared to the Chapter I group with 34.97. The group without Chapter I had a 37.19 mean. The median (40) and mode (46) for the "Without" Chapter I group was higher than the median (36) and mode (43) of the Chapter I group. The mode (46) for the total below cut-score was the same as the "Without" Chapter I group.

Table 51

Fifth Grade

Below Cut-Score Percentages for Below Cut-Score Total Population (Pop.) With and Without E.C.I.A. Chapter I

Total Below	E.C.I.A. Chapter I	Total Pop. Below N	%
27,464	With	9,038	33%
	Without	18,426	67%

Table 52

Fifth Grade

Below Cut-Score Measures of Central Tendency for Total Below Cut-Score Population (Pop.) With and Without E.C.I.A. Chapter I (Chap. I)

Measure	Total Below Cut-Score	E.C.I.A. Chapter I With	Without
Mn	36.46	34.97	37.19
S.D.	8.18	7.84	8.25
Mdn	38	36	40
Mode	46	43	46

Table 53

Fifth Grade

Below Cut-Score Quartile Distribution for Total Below Cut-Score Population (Pop.) With and Without E.C.I.A. Chapter I

Measure	Total Below Cut-Score	E.C.I.A. Chapter I With	E.C.I.A. Chapter I Without
Q_1	32	32	33
Q_3	43	41	44
$Q_1 - Q_3$	11	11	11
Rg	46	46	46

In Table 53, in quartiles one (30) and three (41), the E.C.I.A. Chapter I had lower scores than the "Without" Chapter I group in quartiles one (33) and three (44). The total below cut-score in quartiles one (32) and three (43) were closer to those in the "Without" Chapter I group. In Table 54, the E.C.I.A. Chapter I scored the higher (15) in the 1% range than the other groups. The scores at 10% (24), 90% (44) and 95% (45) percentile were lower than the other groups. The total cut-score group and the "Without" Chapter I group had the same percentile distribution from 5% to 99%.

Race

In Table 55, the difference between the below cut-score group with Chapter I is compared to the group without Chapter I according to race. The Black group had 2,340 (9%) below the cut-score with Chapter I. Hispanics had 2%, Orientals 4%, with 21% of Whites. However, of the total racial population, Whites had 7%; Blacks had 19%; Hispanics had 27%, with Orientals having 10%. Of the group without Chapter I service, Blacks had 5,663 (21%) below with 45% of the total racial group below. Hispanics had 3% of the

Table 54

Fifth Grade

Below Cut-Score Percentile Distribution for Total Below Cut-Score Population (Pop.) With and Without E.C.I.A. Chapter I

Measure	Total Below Cut-Score	E.C.I.A. Chapter I	
		With	Without
1%	13	15	12
5%	21	21	21
10%	25	24	25
90%	45	44	45
95%	46	45	46
99%	46	46	46

Table 55

Fifth Grade

Below Cut-Score Percentages for Below Cut-Score Selected Racial Groups With and Without E.C.I.A. Chapter I and Total Racial Population (Pop.)

Group	E.C.I.A. Chapter I N	Group Below %	Total Racial Pop. Below %
Black			
With	2,340	9%	19%
Without	5,663	21%	45%
Hispanic			
With	533	2%	27%
Without	826	3%	42%
Oriental			
With	105	4%	10%
Without	256	9%	23%
White			
With	5,874	21%	7%
Without	10,883	40%	13%
Other			
With	129	4%	11%
Without	289	1%	24%

group below with 42% of the total racial group. Orientals had 9% below with 23% of the total racial group. The White group had 40% below with 13% of the total racial group below. More students withoutChapter I compared to those with Chapter I were below the cut-score for all groups shown.

The magnitude of the difference is shown in Table 56. Of the group with Chapter I, Whites scored a 36.39 mean with Blacks scoring 31.94. Orientals scored lowest with 29.67; Hispanics had 31.40. Of the group without Chapter I, Hispanics scored the lowest mean (31.92) compared to Blacks with 34.62; Whites with 39.33; Orientals had 32.64. For the median, the Whites scored 38 for the Chapter I group compared to the lowest score (31) by Hispanics and Orientals. Blacks had scored 32. For the "Without" Chapter I group, Blacks and Orientals had the same median 36. Hispanics had the lowest median (33) without Chapter I, and Whites had the highest median (41) without Chapter I. For mode, Orientals with Chapter I scored the lowest with 18. Blacks and Hispanics scored similarly, 30 and 31 respectively. Whites had the highest mode (43). The "Other" group scored 37. Without Chapter I Hispanics, Orientals, and Whites

Table 56

Fifth Grade

Below Cut-Score Measures of Central Tendency for Below Cut-Score Selected Racial Groups With and Without E.C.I.A. Chapter I

			E.C.I.A. Chapter I	
Group	Mn	S.D.	Mdn.	Mode
Black				
With	31.94	8.07	32	30
Without	34.62	8.51	36	45
Hispanic				
With	31.40	8.29	31	31
Without	31.92	10.22	33	46
Orientals				
With	29.67	11.67	31	18
Without	32.64	11.62	36	46
White				
With	36.69	6.98	38	43
Without	39.33	6.74	41	46
Other				
With	33.43	7.98	34	37
Without	37.05	8.08	39	44

were the same with 46 with Blacks scoring 45. The "Other" group also achieved 44. In general, the "Without" Chapter I group scored higher for mean, median, and mode than the "With" Chapter I group.

In Table 57, the first quartile for the Oriental group was 22, compared to the White first quartile with 32 receiving Chapter I services. For groups without Chapter I, Hispanics scored 24, compared to Blacks with 29 and Whites with 36 in the first quartile. In the third quartile, the Hispanic group with Chapter I scored 38, compared to the Orientals with 40 and Whites with 42. For the third quartile without Chapter I, Hispanics scored 40, compared to Orientals with 43 and Whites with 44. Hispanics without Chapter I and Orientals with and without Chapter I had wider interquartile ranges than other groups. The smallest range was scored by the White group between the first and third quartile.

In Table 58, Orientals scored .06 at the 1% compared to Hispanics at 14 with Chapter I. Without Chapter I, Hispanics and Orientals had zero in that range compared to Blacks with 13 and Whites with 18. At 5%, Orientals with Chapter I scored 6, compared to higher scores of 18 for Blacks and Hispanics with

Table 57

Fifth Grade

Below Cut-Score Quartile Distribution for Below Cut-Score Selected Racial Groups With and Without E.C.I.A. Chapter I

	E.C.I.A. Chapter I			
Group	Q_1	Q_3	$Q_1 - Q_3$	Rg
Black				
With	25	39	13	46
Without	29	42	13	46
Hispanic				
With	25	38	13	42
Without	24	40	16	46
Oriental				
With	22	40	19	46
Without	25	43	18	46
White				
With	32	42	10	46
Without	36	44	8	46
Other				
With	28	40	13	34
Without	32	44	12	37

Table 58

Fifth Grade

Below Cut-Score Percentile Distribution for Below Cut-Score Selected Racial Groups With and Without E.C.I.A. Chapter I

				E.C.I.A. Chapter I		
Group	1%	5%	10%	90%	95%	99%
Black						
With	13	18	21	43	44	46
Without	12	19	23	45	46	46
Hispanic						
With	14	18	20	42	44	46
Without	0	15	18	45	46	46
Oriental						
With	.06	6	13	43	44	46
Without	0	14	17	45	46	46
White						
With	18	23	27	45	46	46
Without	17	26	31	46	46	46
Other						
With	12	20	22	44	46	46
Without	15	21	25	45	46	46

Whites at 23. For those without Chapter I, Orientals scored 14, compared to Whites at 26. At 10%, Orientals scored the lowest at 13 and 17 and whites scored the highest with 27 and 31 for with and without Chapter I. At 90% and 95%, groups with and without Chapter I scored close to each other. Orientals, Blacks, and Hispanics scored closely at 90% with Chapter I. Without Chapter I, all groups except Whites scored 45. The Whites scored 46. At 95%, all groups without Chapter I scored 46. With Chapter I, Blacks, Orientals, and Hispanics scored with Whites at 46. At 99%, all groups scored the same.

Gender

In Table 59, for group with Chapter I, 4,752 (17%) males were below with 34% of total gender population below. For males without Chapter I, 9,055 (33%) were below with 66% total gender population below. For females with Chapter I, 4,259 (16%) were below with 32% of the total gender population below. Without Chapter I, 8,971 (33%) were below with 68% of the total gender population.

In Table 60, males with Chapter I scored 34.77 compared to 36.83 without Chapter I. Females scored a

Table 59

Fifth Grade

Below Cut-Score Percentages for Below Cut-Score Gender Groups With and Without E.C.I.A. Chapter I and Total Gender Population (Pop.)

Group	E.C.I.A. Chapter I N	Group Below %	Total Gender Pop. Below %
Male			
With	4752	17%	34%
Without	9055	33%	66%
Females			
With	4259	16%	32%
Without	8971	33%	68%

Table 60

Fifth Grade

Below Cut-Score Measures of Central Tendency for Below Cut-Score Gender Groups With and Without E.C.I.A. Chapter I

			E.C.I.A. Chapter I	
Group	Mn	S.D.	Mdn.	Mode
Male				
With	34.77	8.11	36	43
Without	36.83	8.40	39	46
Female				
With	35.24	7.45	36	41
Without	37.89	7.64	40	46

little higher with 35.24 with Chapter I and 37.89 without Chapter I. Medians were the same for males and females with Chapter I. Without Chapter I, females scored a little higher at 40. With Chapter I, the mode for males and females was the same. With Chapter I, males scored higher with 43.

In Table 61, with Chapter I females scored 30 compared to 29 for males at the first quartile. Without Chapter I, females still scored a little higher. At the third quartile with Chapter I males and females scored the same. Without Chapter I, females scored a little higher with 44 compared to 43. The interquartile range was a little smaller for females.

In Table 62, the males and females with Chapter I at 1% scored similarly. Without Chapter I females scored a little higher than males but lower than the females with Chapter I group. At 5% and 10% with and without Chapter I males scored lower than females. However, in 90%, 95% and 99% scores with and without Chapter I were the same for males and females.

Table 61

Fifth Grade

Below Cut-Score Quartile Distribution for Below Cut-Score Gender Groups With and Without E.C.I.A. Chapter I

			E.C.I.A. Chapter I	
Group	Q_1	Q_3	$Q_1 - Q_3$	Rg
Male				
With	29	41	12	46
Without	32	43	11	46
Female				
With	30	41	11	46
Without	34	44	10	46

Table 62

Fifth Grade

Below Cut-Score Percentile Distribution for

Below Cut-Score Gender Groups With and

Without E.C.I.A. Chapter I

	E.C.I.A. Chapter I					
Group	1%	5%	10%	90%	95%	99%
Male						
With	15	20	23	44	45	46
Without	12	21	25	45	46	46
Female						
With	16	22	25	44	45	46
Without	15	23	27	45	46	46

Table 63

Fifth Grade

Below Cut-Score Percentages for Groups With and Without E.C.I.A. Chapter I and Socioeconomic Status Based on Reading Materials in the Home

Group	N	Below Cut-Score %
E.C.I.A. Chapter I		
With	9,038	33%
Without	18,426	67%
Newspapers		
With	16,449	60%
Without	6,930	25%
Magazines		
With	14,008	51%
Without	8,651	31%
Books (25 or more)		
With	22,423	82%
Without	1,831	7%

Socioeconomic Status

In Table 63, 9,038 (33%) of the below cut-score group received Chapter I, with 18,426 (67%) not receiving Chapter I. Of those who scored below the cut-score, 60% received newspapers; 51% received magazines; and 82% had 25 or more books at home. Of those who scored below the cut-score without newspapers, 25% scored below; without magazines, 31% scored below, without books (25 or more), 7% scored below.

In Table 64, those with reading material in the home of newspapers, magazines, and books scored with similar means of 37. This mean was similar to the group without Chapter I below the cut-score. For those without books, the mean was 32.41 compared to 36.09 for newspapers and magazines. The book mean was above the group with Chapter I but below the without Chapter I group. The median for all three sources of reading material was the same and higher than the Chapter I group, but lower than the "without" Chapter I group. Those without newspapers and magazines had the same median, 38. This was lower than the groups without Chapter I. The group without books scored the lowest median of all groups, 33. The mode for the

Table 64

Fifth Grade

Below Cut-Score Measures of Central Tendency for Groups With and Without E.C.I.A. Chapter I and Socioeconomic Status Based on Reading Material in the Home

	Below Cut-Score			
Group	Mn	S.D.	Mdn.	Mode
E.C.I.A. Chapter I				
With	34.97	7.84	36	43
Without	37.19	8.25	40	46
Newspapers				
Yes	37.24	7.61	39	46
No	36.09	8.32	38	45
Magazines				
Yes	37.22	7.69	39	46
No	36.09	8.15	38	45
Books				
Yes	37.18	7.66	39	46
No	32.41	9.26	33	45

Chapter I group was lower than the mode for all reading sources. The mode for with and without the reading materials was the same accordingly. Those who had reading material had the same mode, 46, as the group without Chapter I.

In Table 65, those without Chapter I had the same first quartile as those with reading material in the home. Those with Chapter I had a lower first quartile than those without reading material with the exception of books. The group without books scored lower than all other groups in the first quartile. In the third quartile, those with and without newspapers and magazines scored the same. The score was higher than those with Chapter I, but lower than those without Chapter I. Those with books scored the same as the others with reading materials. Those without books scored lower than all groups in the third quartile. the widest interquartile range was with the group without books.

In Table 66, those with Chapter I and newspapers score the same at 1%. Those with books and magazines scored higher, but those without Chapter I scored lower. Those without books scored the lowest of all groups at 1%, 5%, and 10%. At 5%, those with reading

Table 65

Fifth Grade

Below Cut-Score Quartile Distribution for Groups With and Without E.C.I.A. Chapter I and Socioeconomic Status Based on Reading Material in the Home

	Below Cut-Score			
Group	Q_1	Q_3	$Q_1 - Q_3$	Rg.
E.C.I.A. Chapter I				
With	30	41	11	46
Without	33	44	11	46
Newspapers				
Yes	33	43	10	46
No	31	43	12	46
Magazines				
Yes	33	43	10	46
No	31	43	12	46
Books				
Yes	33	43	10	46
No	26	40	14	46

Table 66

Fifth Grade

Below Cut-Score Percentile Distribution for Groups

With and Without E.C.I.A. Chapter I and

Socioeconomic Status Based on

Reading Material in the Home

	Below Cut-Score					
Group	1%	5%	10%	90%	95%	99%
E.C.I.A. Chapter I						
With	15	21	24	44	45	46
Without	12	21	25	45	46	46
Newspapers						
Yes	15	23	26	45	46	46
No	13	20	24	45	46	46
Magazines						
Yes	16	22	26	45	46	46
No	13	21	24	45	46	46
Books						
Yes	16	22	26	45	46	46
No	5	17	20	44	45	46

material scored higher than those with or without Chapter I. Those without newspapers and magazines did not do as well as those with newspapers and magazines. At 10%, those with reading material scored the same and higher than those with or without Chapter I. Those without newspapers and magazines scored the same as those with Chapter I. At 90% and 95%, scores are very similar with only slight deviations for all groups at 99%, all groups were the same.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Historically, assessment has played a dominant role in determining the ethos of school life (Broadfoot, 1980). Glaser (1963) suggested the need for criterion-referenced tests to indicate what pupils could and could not do. This concept led to minimum competency testing. According to Cohen, Haney and Lerner (1980), federal programs in the sixties and seventies such as E.S.E.A. Title I did not produce the equalization of outcomes.

The study was designed to focus on the third and fifth grade reading results of the 1987 Test for Essential Learning Skills (T.E.L.S.). The data was used to determine a difference and the magnitude of a difference between reading assessment scores and those at or below a cut-score according to selected variables of race, gender, and socioeconomic status: and, to determine a difference and a magnitude of a difference between reading assessment scores at or below a cut score and those at or below a cut-score that are also in a federal remedial program of E.C.I.A. Chapter 1 according to race, gender, and socioeconomic status.

All data for the study has been given by the Pennsylvania Department of Education to include the T.E.L.S. Test results for third and fifth grades across the state. The T.E.L.S. Test is a state criterion-referenced testing program measuring student basic reading skills. On the testing answer sheet, information covering reading material in the home is included in the data as a measure of socioeconomic status (Pennsylvania Department of Education, 1988). The population is limited to those with a completed T.E.L.S. Test in reading. Non-categorical student test results are included in the data with gifted, speech and language impaired students. Other students classified in special education categories and limited English proficiency were excluded. The design of this study was descriptive in nature utilizing the entire population taking the test.

The data given in the descriptive analysis was organized on grade level according to race, gender, and socioeconomic status to report results. Narrative analysis and statistical summaries describe the research techniques that were used to answer the specific research questions related to the problem.

The following questions were answered in the study and the descriptive statistical findings reported.

1. a. The difference between the Test for Essential Learning Skills' reading scores for all third grade and reading scores for third grade at or below the cut-score was shown according to the following variables:

1) race

2) gender

3) socioeconomic status

According to race, scoring at or below the cut-score, Orientals had 35% below. Blacks had 58% below with 68% of the Hispanics scoring below. Whites had 17% at or below the cut-score. Scoring above the cut-score, Orientals had about 65% above the cut-score. Blacks had 42% above, with Hispanics one-third above. Whites had 83% above the cut-score. These results reaffirm Ortiz's (1986) report that over the past decade Hispanic and Black children continue to read at significantly lower levels than do Whites.

According to gender, scoring at or below the cut-score, males had one-fourth below with females having one-fifth below with three-fourths of the

males above and four-fifths of the females above. Gender differences were shown.

According to socioeconomic status, scoring at or below the cut-score, one-fifth had reading materials in the home. For absence of reading material in the home, one-third were without newspapers and magazines with two-thirds not having books. Above the cut-score, 80% had reading materials in the home. For absence of reading material in the home, one-third were without books. About 70% were without magazines and newspapers. Students without books did not perform as well as those with books above or below the cut-score.

1. b. The difference between the Test for Essential Learning Skills' reading scores for all fifth grade and reading scores for fifth grade at or below the cut-score was shown according to the following variables:

1) race
2) gender
3) socioeconomic status

According to race, scoring at or below the cut-score, 64% of the Blacks and Hispanics scored

69% or below with Orientals having one-third at or below. Whites had 20% or below. Scoring above the cut-score, Orientals had 67% above with Blacks having about 36% above. Hispanics scored 31%. Whites had 80% above the cut-score. These results agree with the 1985 National Center for Educational Statistics in that reading achievement is lower than that of white children (Ortiz, 1986) for Blacks and Hispanics.

According to gender, scoring at or below the cut-score, about one-fourth of the males and females scored at or below with three-fourths of the males and females scoring above. A two percentage point gender difference favored the females.

According to socioeconomic status, scoring at or below the cut-score, about one-fourth had reading material in the home. For absence of reading materials, two-thirds were without books and about one-third without newspapers or magazines. Scoring above the cut-score, about three-fourths had reading material in the home. For absence of reading material in the home, two-thirds were without newspapers and magazines and

about one-third were without books. These findings reinforce Gruiang's (1980) research. More reading material in the home fostered higher reading scores.

2. a. The magnitude of the difference between the Test for Essential Learning Skills' scores for all third grade and reading scores for third grade at or below the cut-score was shown according to the following variables:

1) race

2) gender

3) socioeconomic status

According to race, scoring at or below the cut-score, means and medians were similar for Orientals and Hispanics. Blacks ranked next with Whites scoring the highest. The mode was the same for all groups except Hispanics. Scoring above the cut-score, Orientals and Whites had the same mean and median. Hispanics had the lowest mean and median.

According to gender, scoring at, below, or above the cut-score, the female mean was a little higher. Medians and modes were equal or similar.

Steinin, Steinin, and Newman (1981) had found similar results.

According to socioeconomic status, scoring at or below the cut-score, those with reading material in the home had similar means, modes, and medians. For absence of reading material in the home, those without books had the lowest mean and median. Scoring above the cut-score, those with reading material in the home had similar means, medians, and modes. For absence of reading material in the home, those without books had the lowest mean, median, and mode.

2. b. The magnitude of the difference between the Test for Essential Learning Skills' reading scores for all fifth grade and reading scores for fifth grade at or below the cut-score was shown according to the following variables:

1) race

2) gender

3) socioeconomic status

According to race, scoring at or below the cut-score, Blacks, Hispanics, and Orientals had similar means and medians. Whites scored five to seven points higher with the same mode as

Orientals. Scoring above the cut-score, Orientals and Whites were equal or above the total population in mean, median, and mode. Blacks and Hispanics had similar means and medians.

According to gender, scoring at or below the cut-score and above the cut-score, the magnitude of the differences was small for mean, median, and mode.

According to socioeconomic status, scoring at or below the cut-score, those with reading materials in the home had very little differences in mean, median, and mode. For absence of reading material in the home, those without books had a lower mean and median. Scoring above the cut-score with reading material in the home, median, and mode had little difference. For absence of reading material in the home, scoring above the cut-score, those without books had a lower mean, median, and mode. Mayard (1977) found similar results in his studies.

3. a. The difference between the Test for Essential Learning Skills' reading scores for third grade at or below the cut-score and those reading scores at or below the cut-score that are

also in E.C.I.A. Chapter I was shown according to the following variables:

1) race

2) gender

3) socioeconomic status.

According to race, scoring at or below the cut-score of the total racial population with Chapter I, Orientals had 11%, with Hispanics at 26%, Blacks at 15%, and Whites at 7%. Of the total racial population without Chapter I, scoring at or below the cut-score, Orientals had 24%. Hispanics and Blacks had 42%. Whites had 10%. Hispanics and Blacks ranked below all other racial groups.

According to gender, there were differences with or without Chapter I of the total gender population. With Chapter I, a little over a third of the males and females were below. Without Chapter I, about 62% of the males and 65% of the females were below. More males and females were at or below without Chapter I.

According to socioeconomic status, scoring at or below the cut-score with or without Chapter I, about half had newspapers or magazines, with 71%

having books. Of those without newspapers and/or magazines, more than a fourth scored below, with 13% scoring below without books. Those without Chapter I having reading materials in the home scored lower than those with Chapter I.

3. b. The difference between the Test for Essential Learning Skills' reading scores for fifth grade at or below the cut-score and those reading scores at or below the cut-score that are also in E.C.I.A. Chapter I was shown according to the following variables:

1) race

2) gender

3) socioeconomic status

According to race, scoring at or below the cut-score of the total racial population with Chapter I, Hispanics had 27% below. Blacks had 19% below, with Whites having 7% below. Without Chapter I, Orientals had 23% below, with Hispanics and Blacks having 42% below. Whites had 13% below. Serow and Davies (1981) note that with test/retest gains, minorities benefit less from some form of remediation. More Orientals, Blacks and Hispanics failed compared to Orientals,

Blacks, and Hispanics receiving Chapter I remediation.

According to gender, there were differences with or without Chapter I with females scoring two percentages over males.

According to socioeconomic status, scoring at or below the cut-score with or without Chapter I, more than half had newspapers and magazines with more than 80% with books. Of those without newspapers and/or magazines, more than a fourth scored below with only 7% scoring below without books. Those without Chapter I having reading materials in the home scored higher than those with Chapter I.

4. a. The magnitude of the difference between the Test for Essential Learning Skills' reading scores for all third grade at or below the cut-score and those reading scores at or below the cut-score that are also in E.C.I.A. Chapter I was shown according to the following variables:

1) race
2) gender
3) socioeconomic status

According to race, with Chapter I scoring at or below the cut-score, Orientals and Hispanics had the lowest means, medians, and modes, with Whites scoring the highest. Without Chapter I, the same group had similar results. The without Chapter I group scored higher than with Chapter I for mean, median, and mode.

According to gender, the mean, median, and mode were higher for the without Chapter I group, compared to those with Chapter I. Females scored a little higher mean, median, and mode with and without Chapter I.

According to socioeconomic status, those with reading materials in the home had similar means to those without Chapter I, but lower than those with Chapter I. Those without reading material in the home had a mean lower than the mean without Chapter I. Those without books scored the lowest median and mean. This mean was below the with and without Chapter I groups. The mean for those without newspapers and magazines was lower than the mean with or without Chapter I.

4. b. The magnitude of the difference between the Test for Essential Learning Skills' reading

scores for all fifth grade at or below the cut-score that are also in E.C.I.A. Chapter I was shown according to the following variables:

1) race
2) gender
3) socioeconomic status

According to race, with Chapter I scoring at or below the cut-score, Orientals and Hispanics had the lowest means and the lowest medians, with Whites scoring the highest. Without Chapter I, the same groups had similar results. The without Chapter I group scored higher than with Chapter I for mean, median, and mode.

According to gender, the mean, median, and mode were higher for the without Chapter I group compared to those with Chapter I. Females scored a little higher mean, median, and mode with and without Chapter I.

According to socioeconomic status, those with reading materials in the home had similar means to those without Chapter I. For those without books, the mean was the lowest for reading material in the home. This mean was below the Chapter I group and below the without Chapter I group. The median

for those without newspapers and magazines was lower than the without Chapter I group. Those with reading material had the same mode as the without Chapter I group. The mode was higher than the Chapter I group. Those with reading material in the home and without Chapter I at or below the cut-score scored higher than those with Chapter I.

Conclusions

1. Blacks and Hispanics could rank below all other racial groups in T.E.L.S. Reading due to test item bias, poor test-taking skills, or socio-cultural expectations.

2. Gender differences favoring females are greater in third grade than fifth grade, possibly due to more female teacher role models and developmental delays in males. Reading is also viewed as a female activity.

3. More reading materials in the home promote reading and reading achievement. This correlates with Gruiang's (1980) research, who found a high correlation between reading achievement and the educational environment in the home.

4. According to research (Best, 1988), education is the change agent promoting equity, but the existing

reading programs do not appear to fulfill that role for the Orientals, Blacks and Hispanics.

5. Reading deficiencies for twice as many Orientals, Blacks, and Hispanics are not being addressed by present programs.

6. Third grade students with reading material in the home also need to have adequate remediation programs.

7. By fifth grade, E.C.I.A. Chapter I students with reading material in the home possibly develop a negative attitude toward reading due to peer labeling or appropriate remediation.

8. Students with or without remediation who have books in the home achieve higher reading scores. This may be attributed to higher level thinking skills in books.

9. Remediation does not remove gender differences in reading, possibly due to cultural attitudes.

Recommendations

The conclusions of this study are based on the findings and suggest the following recommendations:

1. The results of this study should be used to analyze the need to increase reading remediation to

those groups with a disproportionate number failing the 1987 T.E.L.S. Test.

2. Further research could focus on identification of quality remediation programs specifically for Blacks, Orientals, and Hispanics.

3. Analysis should be done comparing the fifth grade reading T.E.L.S. scores for 1987 with the eighth grade reading T.E.L.S. scores for 1990.

4. Due to research limitations, further analysis should be done to compare gender and race with reading materials in the home and reading achievement.

5. This study should be replicated in Pennsylvania using several successive years of data for analysis.

6. This study should be replicated using an item analysis procedure to determine specific skills that are the most difficult for specific groups of students.

7. Workshops should be presented to minority parents to improve their role expectations stressing positive attitudes toward reading materials in the home.

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DATA USE AGREEMENT

I understand that I have been granted permission to use data from the 1987 Testing for Essential Learning Skills for my doctoral dissertation at Lehigh University and agree to abide by the following conditions:

1. To prepare tables, charts and text such that test results for particular schools or districts are not revealed.

2. To maintain supplied data which might contain school or district identification in a secure location.

3. To supply the Division of Testing and Evaluation with a copy of my dissertation upon its completion.

Rose Mary Radzievich — Signature

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